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DEVOTED TO SCIENTIFIC BEE-CULTURE AND THE PRODUCTION AND SALE OF PURE HONEY.

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Ruinous Competition.

As we should endeavor to draw appropriate "lessons" from transpiring events, let us try to do so from the facts presented in this and a former number, concerning the failure of some supply dealers to meet the expectations of the public.

There are many against whom no word of reproach can be heard, and who enjoy the reputation of being "reliable dealers;" but why all are not so considered is the question.

We have been accustomed to consider "competition as the life of trade," but it will be well to remember that an unremunerative rivalry is also sometimes the death of it. A moment's reflection will convince all that every person who transacts trade must make a legitimate profit upon what is bought and sold, in order to defray the necessary expenses connected with the carrying on of that business, as well as to pay for the time given to it.

If irresponsible parties cut these figures so much that honorable dealers cannot derive a legitimate profit, then one of two things must happen—either the business will all go into the hands of the dishonest, by the prudent withdrawal of the honorable dealers, or all will go to ruin together.

Buyers are much to blame for seeking to find the one who cuts the figures most, and then trust him with their money, but very often have to mourn

its loss, or the non-reception of the goods ordered within a reasonable time—thus making them practically useless to him. By giving encouragement to unscrupulous dealers—sending orders for queens, bees or supplies to those who offer them at ruinous rates—bee-keepers bring upon themselves the loss of their money in many cases, and also contribute to the more disastrous result of driving honorable dealers from the business in disgust.

We are casting reflections on no individual dealer, and only wish to enforce the lesson, that getting "something for nothing" should never be expected. All should send their orders to reliable persons, and get the best, quality considered, for a fair price. If all will do this for the next season we shall hear far less complaints, and be doing our share of the work in "building up," instead of "tearing down."

The Weekly BEE JOURNAL desires to remedy this evil as much as possible; and would suggest to dealers that it would enhance the interests of the fraternity to have a standard price current, of all kinds of apianian supplies, so that bee-keepers can buy at their nearest reliable supply depot, at the same price as at a distant point, and thus save freight and express charges. This will, in some small measure, remedy the evil, but will not cure it. That cannot be done until all the "irresponsible" dealers are forced out of the business by apiarists who will refuse to buy anything of them.

We submit these thoughts, on the "events of the hour," to the earnest consideration of all interested in the welfare and development of progressive bee-culture.

Borage.—Robert G. Smith, Falkenburg, Ont., writes us under date of August 25th:

Herewith inclosed you will find the flower and leaf of a plant that my bees work on from morning till night. Can you tell me the name of it? We have abundance of goldenrod, but I have not seen a bee on it yet. Will Italians work on it—mine are hybrids. Is mullein considered a good honey plant?

The flower and leaf is borage (*Borago officinalis*). Italian, hybrid and black bees should all work on goldenrod, and yours will probably be busy on it ere the receipt of this paper. We have never observed bees working on mullein, and do not think much of it for honey. In some locations, and under certain circumstances, bees may find a little honey in it, but not enough to justify fostering it.

Lecture at St. Joseph, Mo.

We have consented to give a lecture on "Bees and Honey," at the Court House in St. Joseph, under the auspices of the apianian department of the St. Joseph (Mo.) Inter-State Exposition, on Thursday, Sept. 8, 1881, at 8 p. m. R. S. Musser, Esq., the Superintendent of the department of apiculture, seems determined not only to have a very fine display of bees, honey, apianian implements, etc., but also to try to elevate the science and beget a progressive spirit in the honey producers of the Missouri Valley.

We hope to see a large number of the intelligent bee-keepers of the Missouri Valley at this meeting; we shall endeavor to elucidate many points of interest to those who keep bees and produce honey. Let there be a general rally.

EXCURSION RATES.—The following roads will charge passengers $\frac{1}{2}$ rates to and from the Exposition from all stations on their line: Saint Joseph & Des Moines, Wabash, St. Louis & Pacific, The Kansas City, St. Joseph & Council Bluffs, Hannibal & St. Joseph, St. Joseph & Western, Atchison & Nebraska, Missouri Pacific, Kansas Pacific, Central Branch Union Pacific, Chicago, Burlington & Quincy.

The Indiana State Fair.—The premium list has been increased 20 per cent. Improvements are ordered, and every arrangement will be made for the comfort of exhibitors and visitors. The Capital City will put on its holiday attire. The Public Institutions will be prepared to receive visitors during the Fair week. Railroads will, as usual, carry passengers and freight at $\frac{1}{2}$ rates, and all combined will make the State Fair the great event of the season. Preparation days, Sept. 22, 23 and 24, so that the Fair will open and Committees on Awards begin work on Monday, Sept. 26. The increased interest is demonstrated by the unusual amount of applications for space and other business connected with the Fair thus early.

Local Fairs.—Bee-keepers attending fairs this fall should have a few bee-keepers' manuals, etc., with their exhibits. When taken in $\frac{1}{2}$ dozen lots by express, for this purpose, we will supply any or all kinds, or one or two of each to make the half dozen, at 30 per cent. discount. If wanted by mail, add the postage. We do not send any "on sale or return." We will furnish copies of the BEE JOURNAL free for distribution at fairs.

Taking Him at His Word.

Page 413 of *Gleanings* for August contains the following very singular announcement:

I agree to be responsible for my advertisers, and if Mr. Burch, or any other one, fails to send the goods, or return the money, I will pay back the amount as soon as it is determined that it cannot be collected of such advertiser. It does not seem to me that I should be responsible for damages resulting from delays in filling orders.

Novice has certainly inaugurated a novel feature as a publisher, and one quite as unbusiness-like, though perhaps less reprehensible, than some of H. A. Burch & Co.'s practices. We cannot agree with Mr. Root that he is not as much morally bound to make restitution for damages occasioned by excessive delays in filling orders, as for the money actually remitted. It is easy to imagine cases wherein the latter would sink into insignificance in a comparison. But Mr. Root's whole position is not only unbusiness-like, but it is morally wrong; it shifts all legal responsibility from the contracting party; it assumes obligations without having received an equivalent; it is a temptation to buyers to relax vigilance in the settlement of private transactions; and it is an incentive to dishonest practices on the part of advertisers.

In the article above referred to Mr. Root schedules about \$400, which he virtually assumes to pay for H. A. Burch & Co.—with many more yet to hear from. It is incomprehensible to us how any sane man can establish such a business precedent. By a perusal of the correspondence below, it will be seen he has been taken at his word—not by the parties enumerated in the schedule, but by H. A. Burch & Co. Where this matter will end, it is impossible to foretell; but how it will end can be easily imagined. The following letter is from a former correspondent on this subject:

I have at last heard from H. A. Burch & Co., in the shape of a circular on postal card, the contents of which are as follows:

"Notwithstanding that we have labored earnestly and constantly the present season to fill all our orders, our books show that many are yet unfilled, yours being among the number. In view of what Mr. A. I. Root, of Medina, Ohio, has seen fit to say about us and our business in the July and August numbers of his *Gleanings*, we request you to make out a statement of your account with us and mail him at once for payment, which he will probably do, as per agreement—we will settle with him for the same. In

case he refuses to do this, please report it to us at once. Our reasons for taking Mr. Root at his word will be given you all before many months.—H. A. BURCH & Co."

For the most unblushing effrontery, this firm, I think, will "take the cake." Their business practices will get well aired shortly. E. E. WORTHEN.

Wellsburg, W. Va., Aug. 17, 1881.

The South Haven, Mich., *Sentinel* copies the article from the *Weekly Bee Journal* of Aug. 17, and then comments as follows:

Too much stress should not be put on the statement of H. A. Burch that he is working eighteen hours per day to fill orders, or on any other excuse he makes. In our next issue we will give a case where he has had money since June, 1879, two years and two months, for which the remitter has not received his goods, Mr. Burch making this "eighteen hours a day" plea in *July of last year*. We presume the *BEE JOURNAL* and the *Gleanings* hope his partner (?) the "Co." part of the firm, will return with wealth to make good the claims of apiarists in different portions of the country. Your excuses are too thin, Master Herbert; your only excuse to be made is *thorough restitution of the money*, or an acknowledgment that you really are what so many people consider you.

On the other hand, Mr. G. W. Stanley, of Wyoming, N. Y., was at this office in June last, en route for South Haven, Mich., for the purpose of getting satisfaction for himself and others from Mr. Burch, or "close him up, if possible," to use his own language. He went, and on his return to New York he wrote the following to this office, according to promise, to let us know the *true state* of Mr. Burch's affairs:

I have arrived home at last, and will tell you what success I had. When I called on Mr. Burch I found him very busy with his bees, putting up a lot to ship to a man in Indiana, and I must say they were a very fine lot. I could find nothing about him in his own town to make me think he had any idea of *beating* any one, but, on the contrary, found that he had a great many friends, and was working from 4 o'clock in the morning until 11 or 12 at night to fill orders and to overthrow the charges of *fraud* that are brought up against him. True, Mr. B. is a poor man, but is doing all in his power to not only fill his orders, but to give good satisfaction to all those who send to him for goods. He had, when I found him, 226 colonies of bees in his yard, besides about 40 nuclei, and has a good stock of Dunham foundation and wax on hand.

I can tell you why he advertises that his bees did not die, like those of other bee-keepers, last winter (this I learned from other parties). When he sent out his circulars his bees were in fine condition, but they were allowed to starve late in the spring by the man who had charge of them, and then he (Mr. Burch) had to take the money that was sent in and buy more to fill the orders. Of course, if all those who have ordered goods of him should claim their money at one time he could not pay them all, but he has bees and other goods such as they have ordered to fill the orders, and is doing so just as fast as he can possibly send out the goods.

Mr. Burch has more than satisfied me, and gives me a much better lot of goods than my order calls for, and when I wished the money refunded for one of my men, he seemed perfectly willing to do it, and paid over the amount in full. I will say that so far as I have dealt with *good, honest men*, H. A. Burch does not fall below the average. G. W. STANLEY.

Wyoming, N. Y., July 4, 1881.

The above letter from Mr. Stanley started off the "trouble" for a month, so far as we were concerned. He went

there prepared for war, and came away saying, "So far as I have dealt with *good, honest men*, H. A. Burch does not fall below the average."

Our readers now have an outline of the whole matter before them, and must form their own conclusions.

Since the foregoing was placed in the hands of the printer, a subsequent letter has been received from Mr. Stanley, bearing date Aug. 22, from which we make the following extract:

Our Burch bees are good ones, and I have no reason to complain of Burch in view of the straightforward way in which he dealt with me.

We have received letters, from several parties, complaining bitterly of the manner of doing business by two or three queen-breeders and supply dealers; but hope it will not be necessary to publish them.



MISCELLANEOUS.

The Uses of Honey.—A paper named *Food of Health* remarks as follows:

Honey can be used in lieu of sugar for almost all kinds of domestic use. It has no superior in the canning and preserving of fruits, making strawberry shortcake, etc. Many persons claim that honey disagrees with them—makes them sick. This is a mistaken idea and is owing to those persons having eaten honey mixed with the poison of the bee, bee bread, larvæ, bees, etc., as the old fashioned strained honey used to be. But the honey of to-day, such as is produced by intelligent beekeepers, and bearing their own label, is pure nectar, free from all deleterious substances, and is by far the purest and most healthful sweet known. As an article for the table, both useful and ornamental, what can be superior to comb honey? This is now procured mostly in small frames and is removed from the hives as soon as it is sealed, thus preserving its delicate whiteness. But for use in the cuisine extracted honey is superior, as it is free from wax, being thrown from the comb by centrifugal force.

How, What and When to Feed.—Mr. L. C. Root, in the *American Agriculturist*, says:

In most localities the season for honey gathering to any great extent has now passed. Some sections will afford honey from Sweet Clover (Mellilot), and others from Golden Rod, Aster, Eupatorium, and all fall flowers. In August I urged the necessity of not endeavoring to secure too much surplus, and thus leave the brood combs with too little honey for the bees to winter upon. There will be cases where the honey yield closes very abruptly, when the combs will be fully occupied with brood, and the honey almost entirely stowed above in the boxes. Where this is the case, the bees must be fed. Where fall flowers are abundant, and more honey may be stored than is necessary for winter, empty combs should be supplied, and honey stored for spring feeding.

If there are exceptional cases where from improper management, or from causes referred to above, we find feeding necessary, what shall we feed? I answer, let it be pure honey. I have heretofore advocated the use of the best "A" sugar, but time has changed in our practice. The darker grades of honey are now so low in price that it is no longer to our interest to feed cane sugar and sell our honey. But our strongest argument against feeding other sweets than honey is, that great efforts must be made by bee-

keepers everywhere to preserve the standard of purity of honey. For this reason, I urge that no other food than honey be used for our bees. I am well aware that cane sugar may be used for wintering in such a manner that all of it will be consumed by the bees, but as we advance in the business, I find it desirable to feed more freely. While so many articles of a saccharine nature are being so freely and vilely adulterated, bee-keepers should avoid even the appearance of adulteration.

See to it that each colony is supplied with a good prolific queen. It is important that all queens be of good quality upon entering winter-quarters.

Pasture for Bees a Necessity.—Mr. W. Camm, in the *Bee-Keepers' Guide*, says:

Every season convinces me more and more that bee-keepers must sow honey plants and provide pasture for his bees, and provide if possible a succession of bloom. I sowed 2 or 3 acres of mellilot this spring, on poor, clay hill points; and where sown in oats, it makes a poor show, but where the ground was roughly plowed, and the mellilot alone sown, there is a good stand. Several acres of alsike also were sown, and in moist places it will bloom this fall, but in dry spots it will make a thin stand. These with white clover and buckwheat, will make our main honey crop except where linden is abundant. As I write, late showers seem to have started the honey again and at early dawn the bees fly as though they had found honey dew. I sowed a good deal of mustard but its period of blooming was so brief, the bees worked upon it so few hours each day, that I shall not sow it again. Catnip and a kind of wild, white flowered mint, is crowded from morning until night, and upon mignonette they swarm all through the heat of the day. A card from the Rev. A. Salisbury, Camargo, Ill., says that his patch of 5 acres of mellilot swarms with bees from time of flowering until frost, and that it completely bridged the season from white clover till fall bloom; but of quality and quantity of yield he would not speak, as 500 colonies more or less, had pastured on his patch till the present season.

I would rather have common black bees with plenty of continuous bee bloom, than the best of Italians, Cyprians, or Hungarians and poor bee pasture.

Management of Comb Honey.—Mrs. L. Harrison, in the *Prairie Farmer*, gives the following advice:

As soon as the cells are sealed, it should be removed, so as not to get discolored with the travel of the bees. To be gilt-edged, that is No. 1, its snowy whiteness should be preserved, and whoever has this kind to sell will win the day. We know bee-keepers who let the honey remain on the hives, until frost drives the bees down into the body of the hives, for warmth. The honey that remains on during the season becomes discolored, and has not that delicate tenderness that comb honey has that was built and filled quickly, and removed as soon as completed.

In our early days of bee-keeping, we were yearly shipwrecked in the keeping of our honey, after we had followed these directions. "Why?" The place we kept it in was not according to bee-lore. We tried the cellar, an upstairs closet, an airy chamber, all with the same result. The honey would sweat, get watery and ooze through the comb and run from the boxes. When it was in this condition we would have to put it on to the bees again for them to dry it up, which they always quickly accomplished. We did not like doing our work twice over, and in our dilemma, thought we would try the kitchen, as we had failed in every available place. We wrapped the boxes in newspaper, tied them up securely, in order to keep

dust, smoke or flies from defacing the wood, and put on top of a cupboard all the place would hold. There was a coal fire in this room to do the cooking, and at times the thermometer stood at 100° in the shade on the adjoining porch. We thought at the time that the great heat would melt it into a heap at the bottom of the boxes; but far from it, remaining perfectly dry—it was cured. Two years afterwards a lady who had purchased a box of it, showed us a comb, saying; "I can handle it as easily as a piece of cake—it is dry and not sticky one particle." Our experience proves to us, that to keep honey perfectly, it must be kept in a hot, dry, airy place. Other localities may differ in this respect, we have only experience in this locality.

Clover as a Fertilizer.—Discussing the mysteries of fertilization, the *American Cultivator* thus alludes to experiments with clover:

For the last forty years there has been no article known to agriculturists which has so largely claimed the attention of the men of science, or indirectly that of the farmer, as has nitrogen. Theory and practice alike have confirmed the opinion that there is no more important element, either in the vegetable or animal kingdom, than this, and yet how, or in what manner, or in what kind of combinations, it enters into the vegetable kingdom, we know no more than we did when the inquiry first began. We can discourse eloquently about the fertilizing qualities of Peruvian guano, we can tell how its fertilizing qualities depend on the amount of nitrogen entering into the plants and we know that clover is a wonderful fertilizer, that it leaves a large amount of nitrogen in the soil, in its roots and scattered leaves; but whether it did not accumulate the whole from the soil and present it to us in new compounds, or, through its leaves, presenting substances to the nitrogen in the atmosphere which would combine with it so that it could be carried to the soil, and made of advantage to other vegetation, we are today as ignorant as we were 100 years ago. But this we do know, that one kind of vegetation does furnish and prepare food for another kind, and in this way we find the practical value of alternating crops.

Mr. Lawes, in 1873, experimented with barley and clover. He sowed half a field with barley without manure, which had been kept in crop the 3 previous years, and fertilized with artificial manures: the other half had been sown to clover the year previous. The yield of barley was 31 bushels to the acre, and clover 3 tons 48 pounds per acre. The next year the whole field was sown to barley without manure. The half previously in barley gave 32½ bushels; the other half after clover gave 58 bushels per acre. Thus we see that after taking off a very valuable crop of clover he had increased the fertility of the soil to almost double that of the half which had been in barley. Now, without entering into any speculative theories of where this amount of fertilizing material came from, we have the facts from which we cannot ignore that by the aid of clover the crop of barley was vastly increased. Nor can we without presumption say that this fertility was the result of nitrogen which the clover collected any more than it was the result of phosphoric acid and potash, which it had also collected,—for unless there were already accumulated in the soil these two principles equivalent to the requisitions of that amount of barley, it would have been in vain that the soil obtained through the clover the necessary amount of nitrogen.

Bee-Keepers' Union.—The Eastern New York Bee-Keepers' Union Association, will hold their eighth semi-annual Convention on Tuesday, Sept. 27, 1881, at 10 a. m., at Knowersville, N. Y. All bee-keepers are invited to attend. W. D. WRIGHT, Pres. N. D. WEST, Sec.

CORRESPONDENCE

For the American Bee Journal.

How to Winter Bees Successfully.

JAMES HEDDON.

I have just read the prize essay of Mr. Chas. Dadant on the above subject, and never before was I so struck with the difference in the actions of bees and the treatment they require, in different localities varying so little in latitude. In this article I will refer to some of these differences, and different conclusions arrived at therefrom. He says: "Bees in winter do not inhabit the combs which are filled with honey. They gather directly below the sealed honey."

Here this is true where hives are left with tight wood covers, but with the Langstroth hive the cluster rises to the cushion many times, clustering square upon solid sealed comb below, but almost universally filling the space between the top bars and cloth above all, through the winter, passing over from comb to comb in this space (which is about 2 inches) and working forward and back through the ranges between the combs, thus being able to avail themselves of any honey the hive may contain. The quilt seems to attract them to it.

I supposed the "water in winter" question was either unsettled or conceded that all attempts to supply colonies by means of sponges and panes of glass as condensers, had failed to give any satisfactory results.

Dysentery is the only winter trouble of any moment known in this vicinity. Whatever will cause winter breeding, will tend to engender the disease. If water will do it, then let us "keep dry." Perhaps from this cause lies the success of the use of absorbents above.

In regard to bees being unable to reach their stores, I have demonstrated that bees cannot pass from comb to comb through passages such as they have between the ends of the frames and the hive, when the hive is continually in a temperature of 42° F., but will starve with honey close to them. This being true, bees are hardly as safe in special repositories (where no special passage-room is made for them) as they are out-of-doors, unless the winter is of continued severity. Ordinarily, many times during winter the sun strikes the hive with sufficient warmth to raise the temperature in the hive so that the bees can pass over and around the frames. Here it is calculated that 25 pounds of honey are required to sustain a normal colony from the time that they cease gathering until they begin again. Only about one-half of this amount is required to feed the bees during the time they are confined to the hive. But little more than one-third is used if but little breeding takes place. Winter breeding, however successfully done, is of little or no value here.

That crystallizable sugar is most easily digested by the bees I have no doubt, but this fact plays but a small part in our success or failure to winter our bees, in my judgment, for if they eat pollen with it, dysentery and death will be apt to result.

About twelve years ago, in the month of October, I bought 15 colonies of bees in 10-frame Langstroth hives, of a neighboring farmer. Owing to the season, these hives were almost exclusively basswood honey (the most crystallizable we have here) and in less than six weeks after putting them away all were dead with dysentery in its worst form. They were in a choice cellar. I was first led to believe from the expressions of others, that late (dark) honey was unsafe for wintering bees upon. Experience, coupled with close observation, led me to believe that it was the best. I now think that the secret is this: when we have combs of fall honey we usually have them

full to the exclusion of fall pollen, and in this lies our success.

Mr. Dadant speaks of "5 or 6 weeks" as a long time for bees to be confined, but says they will stand it if the honey is pure, etc. Last winter our 74 surviving colonies were completely confined for nearly 5 months, and that, too, during spells of continued cold of a severity seldom ever known here before, and a majority came through healthy and bright. All wintered out-of-doors, and a few entirely neglected.

One fall, in packing my bees, I left many with the brood cover tightly sealed, leaving no upward ventilation or absorbents above whatever. I lost about one-third of my colonies, but there was no difference in the condition of those with, and those without ventilation through absorbents above. Seeing no difference, I tried the same experiment the next winter, and obtained a decided preference in favor of the absorbents above, though a few, with no absorbents or other upward ventilation, were in fine order—wintered perfectly. May it not be that whenever tight tops act as condensers, and this tends to stimulate breeding, that dysentery results?

I always objected to imprisoning bees during winter, because the moment they find out they are prisoners, they become excited to a degree that causes them to eat all sorts of food obtainable, and unreasonable quantities of it. Next comes a statement in Mr. Dadant's article which, while I have no desire to question its being put into successful effect in his location, would be ready death here. I quote:

"Now, after a spell of more than a week of cold weather, as soon as the thermometer rises to 45° in the shade, I disturb every colony to compel their bees to fly out."

In successfully wintering bees in this climate, the first desideratum is to get the colony into that quiet, semi-dormant state which holds success in its hands for any length of time that it remains with them. This condition our bees nearly always enter into when first closed in by cold, and every time they are disturbed and aroused to activity, the chances for getting them back into this quiet state grow less; particularly so as the winter advances. Flights in the fore part of the winter are seldom of any benefit, not being needed; in the after part, they tend to stimulate breeding, which has a tendency to destroy our bees. Repeatedly have I noticed the evil effects of a "purifying flight." During the winter of 1874-75, I had housed about 35 colonies. Towards spring they had the dysentery badly, so much so that I lost all but 14 of them, and as the cold frame was then among the great discoveries, I put one I had in operation. I raised the mercury to the proper temperature (I think 60° or 70°), and placed under the glass, on a straw floor, three of the diseased colonies. They were strong in numbers, and flew and voided fully and satisfactorily (more so than they do out-of-doors in the same length of time), and returned to the hive with scarcely any loss. I was proud of my success, and determined to put more through the next day if the sun shone, and if not, as soon as it did. Before it shone, however, those three colonies, and those only, were dead. I have been told of three different instances where, in carrying out bees from the cellar in the spring to stay, a colony or two was overlooked, and not discovered till late in April or early in May. In every instance these colonies were the best of the season.

The only cases where I have noticed any good to arise from winter flights, were where the bees enjoyed several days of perfect freedom to bask in the sunshine, and that before the time for breeding to begin. This truly shortened the time of confinement, with no disastrous effects to more than offset the good obtained thereby.

It seems that in Mr. Dadant's locality the bees should "never be placed in the repository after a few days of cold weather," while George Grimm considers the reverse of this condition

of things one of the requisites to success in his locality. Here, in our section, I think that some seasons early housing, before any cold weather has appeared, is best, while in other seasons a few cool, or even cold days are needed to get the stubborn bees into the semi-dormant state.

I have believed and held all along, that whatever the cause of our winter losses was, it was one cause, to which all other influences were as fox-fire to the sun, and at best only acting as aggravations to the great cause, and, as stated in my former article, I feel sure that the great main cause is the winter consumption of bee-bread. Last winter bees that were cellared were much better off than those that were left outside in this climate in any shape, because while those inside had the advantage of a less consumption of food (which resulted in many cases in a total abstinence from pollen-eating, though I know of one cellar full where all died), those outside had not the usual advantage of a thorough midwinter flight, or several of them, as was the case the winter before.

I know of several cases where packed colonies came through in splendid order, one lot being a whole apiary; other cases, where bees entirely neglected did usually well. But these were exceptional cases. I think last winter's experience gave no proofs why we should turn from the out-door packing to the cellar. Perhaps a little of both would be good for large apiaries. We often hear old residents say that years ago bees did not die during the winter if they had honey enough. I notice that at that time most of the honey was gathered from trees, while now, under a more advanced age of improvement of the country, these trees have been exchanged for weeds, the latter being greater pollen producers than the former, especially in the fall of the year.

Mr. Dadant's article, above referred to, is one of much thought and information, and I appreciate it. I only desire to point out the difference in treatment required in different localities.

Dowagiac, Mich., Aug. 8, 1881.

For the American Bee Journal.

How to Get Rid of Fertile Workers.

W. H. ANDREWS.

In the BEE JOURNAL, Aug. 10, 1881, Mr. E. A. Thomas writes under the above quoted heading, and I feel sure that as a generous man he will not think it unkind if I question some of his teachings, both as to logic and facts.

First, he says: "I think there is a difference in colonies, for, while some will readily accept the means of obtaining a queen, others seem bent on their own destruction," etc. Now, this implies that some colonies have innate peculiarities less favorable in their own perpetuity than in the happy nature of others; this, in my humble judgment, is error not meant.

The difficulty in introducing queens and brood into queenless colonies increases with the length of time the colony remains queenless and the number of laying workers therein produced; there is no exception to this rule.

Second: "I have never had a full colony with a fertile worker, but now and then have a nucleus colony, which loses their first queen on going out to meet the drone, and so has no means of supplying the bees."

This implies at least one, and may be two of three things: 1st, that Mr. Thomas never had a full colony; 2d, that full colonies never lose their first queens; 3d, that when they do lose their first queens they are never without the means of supplying their loss. I take it that not one of these conclusions is correct in point of fact.

Third: "I watched her while she laid quite a number of eggs, the bees treating her with all the consideration they would a queen, and then I pinched her head."

I do not question the correctness of

the statement that Mr. T. saw a worker lay quite a number of eggs, for I have seen quite a number of workers laying in the same comb at the same time, but that "consideration" business puzzles me, for I never saw that, or anything that I could mistake for it; if the other workers give the laying worker the consideration they are wont to give a queen, Mr. T. should have no occasion to be troubled about informing his readers as to the best mode of ridding a colony of the fertile worker, for he would only need to say, examine your combs, and when you see the other workers treating one worker "with all the consideration they would a queen, why, just there and then, pinch her head"—that would settle it. There is no mistaking the consideration given the queen by her workers.

I get rid of laying workers by giving the colony one frame of brood, in all stages, each day for 5 successive days, and the work is done.

A very good way is to put the colony into a transportation-case (a light box made so as to receive a bee hive and shut it in bee-tight, with handles on each side) and set the case a few steps off, and then set a new hive on the old stand and put into it a comb of brood in all stages, and a comb of honey, then raise the rear end of the case lid slightly, so that the bees will find their way out slowly; at the end of the fourth day shake all the bees that still remain on the old comb off at the entrance of the new hive, and it is accomplished.

McKinney, Tex.

For the American Bee Journal.

The Degeneration of Bees.

S. S. BUTLER, M. D.

How to make and ruin an apiary by gradually reducing the vigor of the bees by artificial swarming is the question. Mr. G. W. Thompson, in the BEE JOURNAL of May 25, page 166, in the 3d column, under the head of wintering, says:

"Meeting a man who keeps bees, some distance from my home, I asked how they wintered; he replied, first rate, sir. How many had you in the fall, said I. Eight. How many now, I inquired. Eight, doing finely, pointing to 8 weather-beaten pine boxes on a bench; no protection except some boards nailed against the fence. There they stood in January just as they did in August—no cellar, no chaff no dead-air space, and no dead bees."

Now, why did those bees winter well in those common hives with no protection, when so many over the country were lost? I claim that his bees had not lost any of their natural vigor or toughness, had not degenerated by either rearing forced queens himself or being near enough to one who has, for his queens to get fertilized by imperfect drones, from their forced (and as I claim imperfect) queens, thus giving workers not up to the regular standard in hardiness. The proof is that they wintered without loss. I defy anyone to give any other reason than that they had the necessary vigor and hardiness to carry them through the winter in spite of the cold and long confinement. So would all those bees that were lost have been hardy enough to have carried them through, if it had not been for vigor lost by almost every beekeeper rearing or buying, for years past, forced queens, and, by so doing, lowering the standard of his bees. It is almost impossible to find one who keeps bees in the common hive, who either rears a good many forced queens by driving or has a dividing neighbor near enough to spoil the vigor of his bees in a few years.

One of the first plans given us for forced swarming, with movable frame hives, was by dividing, by taking $\frac{1}{2}$ of the combs and putting them into an empty hive, setting it beside the old one, the entrance of each being a little one side of the old one, so as to retain about the same amount of flying

bees. This, of all the various plans of artificial swarming, has no doubt been practiced the most, and caused the most injury to the bees of the country.

Let us follow out the workings of this process and note its results. The queenless part rears one from larva, from 1 to 3 days old, making a queen not up to the standard of one reared by natural swarming, which will give workers that want honey in abundance close to the apiary, or else they will try to steal it from their more vigorous and successful neighbors. I had a cell sealed up in 45 hours where I put a frame of brood in a queenless colony to find out if they had one. Does any bee-keeper think that queen, if I had allowed her to have been fertilized, would have borne any comparison to one reared in a colony in a normal condition from an egg? This forced queen, if she lives till next spring (for they are short lived) will fill all the drone-comb in her hive (such being generally great drone layers). Those drones fertilizing queens, stamp their imperfect individuality on the workers, which have lost a portion of their toughness or vigor, and as queens are reared from those worker eggs; the next forced queen made by dividing is poorer still, giving the apiarist poor workers which bring him in but little honey. He goes on dividing (for he is getting rich, making colonies by the quantity, worth a good sum each).

What wonder if after this reducing system has been practiced for a few years, he finds his queens very short-lived and is puzzled about it! He reads that *queens* live from 3 to 5 years, and finds that his bees, that wintered almost any way the first few years, need a great deal of nursing, require costly chaff hives and cellars to winter them well, but when they get so reduced that they can stand but little, cellars or chaff hives do not save them in such a winter as the last. One who had been sneering at his "old foggy" neighbor with common box hives, who is far enough from him not to have his bees spoiled by drones raised from his poor forced queens, ought to see why his bees wintered so much better than his own. Forced queens give great quantities of imperfect workers, that the workers kill off in great quantities where they kill the drones.

Such are the results of too much dividing. How is it with forced queens reared in full colonies, largely advertised? The queen and brood are taken away, and after the bees get over their worry, they commence cells, often allowing the eggs given them to hatch and be fed worker food 1 or 2 days before giving them royal food and enlarging the cell. They generally start so many cells that the nurse bees are not able to furnish royal food for them to make perfect queens, although I have seen but 3 or 4 of those small half-starved looking cells in a large colony, that worried a long time at the loss of their mother and brood. I am satisfied that the difference in size of cells made by a swarm in normal condition, or an abnormal one, is the lack of ability to furnish a large quantity of royal food, so they half starve them; while in the large cells reared in the hive that has swarmed naturally, we often see a quantity in the cell after the queen has left. We never see any in the small cells, where the bees are forced to make a queen, no matter how they are forced.

Any one can demonstrate this matter, by rearing forced, instead of natural queens, as hundreds have, in the past, and reported by scores in the bee papers, about as follows: See *Gleanings* for Feb., 1881, page 84, by J. C. Phillips, this being an almost exact report: "I kept bees in the old foggy style till 1872, when I began with a movable comb hive with 2 stands, increased to 6 by dividing, got no honey; started next spring with the 6 (you see he wintered well); this and the two following seasons increased mostly by dividing to 15, took 600 lbs. honey; next year I increased by di-

viding to 35, and took 1500 lbs. honey; next spring I had 30 (he did not winter quite as well), increased to 75, mostly by dividing; the next May found me with 11, it being a good year, increased by dividing to 52." This brings him down to such a winter as the last, which, no matter how much pains he has taken in wintering, closes him out.

Los Gatos, Cal.

For the American Bee Journal. A Model Prize List.

WM. F. CLARKE.

Complaint has often been justly made that at our great agricultural shows there has been scarcely any recognition of honey, hives, and bee-keepers' requisites. Generally speaking, this important productive industry is ignored, or nearly so. Under the influence of our Bee-Keepers' Association, formed last fall, "Canada's Great Fair," which holds in Toronto, from Sept. 5 to 17, has introduced a section into its prize list, the publication of which may perhaps act as an example and stimulus to the managers of other exhibitions in various parts of this continent. It is as follows:

Honey and Apian Supplies.

Entrance Fee, 25 cents.

- Largest and best display of honey, \$10, \$5.
- Best 10 pounds of extracted honey, \$5, \$3, \$2.
- Best 10 pounds of comb honey, \$5, \$3, \$2.
- Best methods of marketing extracted honey, \$5, \$3, \$2.
- Best methods of marketing comb honey, \$5, \$3, \$2.
- Best comb foundation for brood-chamber, diploma.
- Best comb foundation for honey boxes, diploma.
- Best and most scientific mode of wintering outdoors in any kind of a hive, \$5, \$3, \$2.
- Best house for wintering bees and of most use for apian purposes in summer; working model to be on ground, represented by a scale of not less than one inch to the foot, \$5, \$3, \$2.
- Best winter and summer hive, diploma.
- Best and most practical invention for retaining even temperature in bee house, \$3, \$2.
- Best wax extractor, diploma.
- Best mode of securing the largest yield of box honey from a single hive, \$3, \$2.
- Best and most valuable invention in bee hives not heretofore exhibited or made public, bronze medal.
- Best non-swarming hive, diploma.
- Best bee smoker, \$2, \$1.
- Best honey knife, \$2, \$1.
- Best honey extractor for general use, \$2, \$1.
- Best exhibit of bees and new races of bees, diploma.
- Best and largest display of apian supplies, \$10, \$5.
- Best and most practical new invention for the apiarist, \$5, \$3.
- Best form of hive, bronze medal.

Critical readers of the above will be able to detect deficiencies in it, and it is only fair to say that it was prepared as the result of individual suggestion. Our Association as such, has not yet had an opportunity of considering it. No doubt, improvement will be made on it next year. Indeed, it would be a good thing if the North American Bee-Keepers' Association would bring its wisdom to bear on the matter of a prize-list, which, with slight modifications, might do for all our State and Provincial exhibitions.

Listowel, Aug. 17, 1881.

For the American Bee Journal. Introducing Queens.

A. F. MOON.

The success in introducing queens is due more to the method than what is sometimes termed "luck." I have tried nearly every plan, and long since adopted the following one:

Remove the old queen from the hive you wish to re-queen, and place the wire cage containing the queen between 2 combs of sealed honey. If the cage is too thick, cut out a piece of comb large enough to receive the cage and place her gently into the hive. If she is a fertile queen there are always some bees, like the good Samaritan, who will feed and care for her. Leave her in the cage for 36 hours, and on the third morning carefully examine every frame, destroy any and all queen cells that may be started, and gently lift the queen out on a frame of brood. If she is received friendly the bees will surround, feed and caress her. Should any worker show signs of stinging, it will be better to recage her until the next day, when all will be right.

The disposition of the honey bee very much resembles that of the human family; some are always peevish and fretful, while others are gentle and kind; some colonies will receive a strange queen within an hour after the loss of their mother, and some colonies will never start a queen cell after their mother is removed, providing a fertile queen is immediately given to them; while other colonies show hatred toward their stepmother, and a constant desire to rear a new queen, by starting from 5 to 25 queen cells.

I have tried introducing queens by taking off all the bees from the combs and daubing the queen well with honey. I have had pretty good success, but have found some that had fallen a prey to the angry bees by their balling her. In this case it is sometimes difficult to rescue her. I have even known them not to kill her after giving her a severe hugging; her pitiful cry for mercy may have saved her. I have known them to hug a queen for a whole day and then receive her.

To get rid of fertile workers I give them a frame of brood containing, if possible, a few queen cells; it does not matter materially if they are sealed. I now remove from the stand one of the strongest colonies in the apiary, place the queenless colony in its place, and the strong one where the colony containing the fertile worker stood, and the job is complete. If sealed queen cells are given, under these circumstances, the bees seldom molest them; the colony, through surprise, are thrown into confusion, and are made sensible of their loss at once, and are more apt to recognize their want and appreciate their prosperity by receiving a new mother. It is seldom that bees destroy uncapped queen cells, on account of their strong attachment for their young.

The weather is very dry, a heavy drouth now prevails and the bees are doing nothing.

Rome, Ga., July 28, 1881.

Rural New Yorker. Improving Honey Plants.

CH. DADANT.

The family of the Leguminosæ is one of the best for bees and for cattle. In this family we find the White Clover (*Trifolium repens*) of our pastures, the Melilot (*Melilotus alba*) whose name is derived from the Greek word *meli* (honey) and the Sainfoin (*Onobrychis sativa*), a plant which does not withstand our winters, but which, in France, gives the best honey and the best fodder.

Nearly related to the White Clover is the Red Clover (*Trifolium arvense*), which furnishes as great a quantity of honey as any one of the plants mentioned. Every country boy has sucked the honey from the tubes of its corollas; but few know that, if they had the chance of tasting this sweet, it was because bumble bees are nearly the only insects which can reach it, and bumble bees are too few in number to absorb such a large crop, which, therefore, remains unharvested, the corollas of Red Clover being too deep to allow the honey bees to suck it.

These corollas are only a very little too deep; for, during the drought of some summers, the flowers of the second crop, being a little shorter, the Italian bees find in them a good harvest; yet it is doubtful whether in the best circumstances their probosces are able to reach the bottoms of the tubes. Moreover, the honey of the main crop is always out of reach of the bees, and the aim of bee-keepers is to produce a kind of bees endowed with a tongue long enough to reach the bottom of the clover blossoms, or to produce a kind of red clover whose blossoms would be shorter or wider, so that bees could suck all the honey; or to attack the difficulty in both ways at the same time. The work has already begun. Some bee-keepers try to produce bees endowed with longer probosces, and some others are selecting,

in the fields, the plants whose corollas are wider or shorter than usual, in order to secure a sort in which they will be broader. But the task will be long, and we want help, if not in regard to bees, at least in regard to the selection and propagation of selected plants.

A seed grower who would take the thing in hand, planting selected clover with this object in view, if he succeeded, would be sure of a good sale of seeds at remunerative prices; for every bee-keeper would try to have the new variety introduced to his neighbors. Of course, the end to be attained is, not to produce a short corolla by raising a diminutive plant, but to create a strong, vigorous kind, endowed with short or wide corollas, the sap of the plant being directed more towards the branches and the leaves than towards the corollas.

I dare to predict for the lucky man who would succeed in raising a clover with such fixed characteristics, large sales and big profits.

Hamilton, Ill.

For the American Bee Journal.

A Few Interesting Facts.

J. H. MARTIN.

It is a fact that many apiarists admire the use of sugar syrup upon which to winter bees, in preference to natural stores.

It is a fact that there are a dozen or more glucose factories in our country making tons of a deleterious substance used solely for adulteration.

It is a fact that our grocery-men are selling sugar and syrups adulterated with glucose, because it gives them greater profits.

It is a fact that the consumer finds his sugar entirely different from what it used to be. It has less sweetening power, and is hard and lumpy.

It is a fact that glucose will kill bees if you attempt to winter them upon it, either in liquid form mixed with honey, or sugar syrup, or in the form of candy.

It is a fact that bees will winter well upon good sealed honey.

From the above facts we have reached the conclusion that it is better to winter upon natural stores, than to run the risk of buying sugar, a portion of which is glucose.

Hartford, N. Y., Aug. 19, 1881.

For the American Bee Journal.

Origin of Sending Queens by Mail.

C. J. ROBINSON.

It appears that some of the enterprising queen breeders deem it very important that queen shipping cages have many distinct features to render them suitable in the highest degree. The essential features of such a cage are quite simple—only to afford bees the conditions requisite, as I learned from experience before any other party ever mailed a honey bee. My humble self has the credit of being the original shipper of queen bees by mail transit. It was from necessity that I devised the mode of transporting queens through the mails, and contrived a shipping cage.

In 1859, when the Italian bees were first imported, up to July, 1862, I was receiving queens from J. P. Mahan, of Philadelphia (the first successful importer of bees), and also from others, including Rev. L. L. Langstroth, who shipped by express. At that time no express office had been established at this point, and I was bothered to get packages from the office in due time. I wrote to Mr. Langstroth, asking his opinion on the feasibility of sending queens per mail. He answered, signifying that he deemed the plan impracticable. Still I was bent on trying the experiment, and caged a black queen in a package, which I addressed to Mr. Langstroth and mailed it. In due time the queen, with a few workers, arrived at Mr. Langstroth's post office all right. Then Mr. L. contrived a

cage, in which he put a fine Italian queen, with a few workers, and mailed to my address. When the package came to hand the workers were all dead and the queen died soon after. I reported the arrival and ill success to Mr. L., who contrived a cage different from his first, and sent it with a queen to me by mail. His second attempt proved as successful as my first was. Such is the history of the origin of transporting queens through the medium of the post office department. Richford, N. Y.

For the American Bee Journal.

Cyprian and Palestine Bees.

A. W. OSBORN.

The accompanying letter from Mr. G. M. Doolittle, whose judgment we respect, will, I think, be of general interest:

Borodino, N. Y., July 25, 1881.

As to Holy Land queens and bees I know nothing, but will say that I believe the U. S. would have been just as well off without them. You will see that as the Holy Land and Cyprians are so nearly like the Italians as to color, that should they prove inferior, they cannot be separated, as can the blacks and Italians. Let me prophesy: Five years from now, but few persons in the United States will be able to tell of what their stock consists; for just as soon as Palestine and Cyprian drones are plenty, who can tell by the workers or queens whether their queens have mated with an Italian, Cyprian or Palestine drone? Hence you will see, that should these last two prove inferior to the Italians, we are in a dilemma. I know the rush generally goes for something new, but I am content, at present, to let others try these bees.

G. M. DOOLITTLE.

Thus far, I have not found the Holy Land bees superior to the Italians. I handled over 400 queens this summer, both Italian and Holy Land, and I watched them closely. Perhaps the Palestine bees are not suited to our dry seasons, and under the most favorable circumstances would make a better showing. With us the honey season is over. The yield has been very light, not more than 1 apiary in 10 that has taken any surplus. The remaining 9 will have to be fed, to keep the bees from starving. But we live and work on, cherishing the hope that next year will make up for this, and in fact, bee men have come to believe that it is impossible to obtain 2 good crops in succession.

I wish the best of success to all the bee-keepers of the East, and prosperity to the BEE JOURNAL, which comes to us every week, filled with good things.

Los Angeles, Cal., Aug. 13, 1881.

For the American Bee Journal.

The Calendonian Apiarian Society.

J. D. HUTCHINSON.

This society held their 8th annual exhibition at Sterling, on July 26, and 3 following days, and as in former years under the patronage of the Highland and Agricultural Society of Scotland.

Owing to the very wet weather which we have experienced here all this summer, there was only a limited display of honey; but this was more than made up by the fine appearance of the "observatory hives," which, as usual, was a great attraction, the queen being eagerly sought after. In this department the competition is getting keener at every show. The first prize was awarded to Mr. D. Woods, of Benmore, whose hive was much noticed for its ingenuity and beauty. It is made to serve two purposes, that of an ordinary observatory hive, and is adapted for both summer and winter use. The frames, 4 in number, are arranged in 2 perpendicular rows, and above this is placed a number of small section boxes, which

the bees fill with comb honey: just as if they were in an ordinary bee-frame hive. This hive can be all closed up in a few seconds, and the bees can be kept in it throughout the winter in perfect safety. The second prize was awarded to Mr. Young, of Perth, who exhibited an ordinary 6-bar Woodbury hive. Both these hives were well stocked with beautiful bees.

Great interest was also manifested in class 2, for the best colony of Cyprian, Ligurian, or any other foreign bees exhibited in an observatory hive. 1. James Johnstone, of Touch. 2. William Sword, of Falkirk. There was a large number of entries in the competition for the hives, but as there was nothing of any particular note, I need not trouble you to enumerate the awards.

In class 9, Mr. Johnstone carried off 1st honors with his samples of comb foundation, and wax in cakes of 2 lbs. each.

The competition in the honey classes were very few, and the only exhibits of any interest was a few magnificent Stewarton boxes from Ayrshire, and a number of small 1 and 2 lb. section boxes of fine comb honey. The fine display of run or extracted honey which is yearly seen at this show was greatly missed. Class 23, for the best liquor or wine made from honey. 1. D. Wood.

For the best cakes made with honey. 1. Wm. Sword. The above exhibits were very tasty, but oh! how quickly they did vanish. In the miscellaneous classes there was a good display of hives, supers, bee-furniture, bee-gear, honey extractors, etc.; and amongst the principle hive winners in this class were Messrs. Young, Wood, and Kinneir.

The driving competition for the Highland and Agricultural Society's silver medal, took place on the last day of the show, in the large manipulating tent belonging to the Bee Society. There was a large number of competitors, and after a very keen contest, the judges awarded the first prize to Mr. W. W. Young, who captured the queen in transit in 1½ minutes, and finished the driving of the bees in the same time. Miss Stewart, of Sterling, came second, and was awarded the society's own silver medal; she took 4 minutes to capture the queen, and other 3 to finish the driving. The judges were Messrs. Anderson and Muirhead. During the 4 days of the show, the weather was very showery, and at times rained very heavily; but the visitors seemed to enjoy themselves to the utmost extent. Altogether, the show was a great success, both financially, and otherwise, and much credit is due to the committee for the way in which the arrangements were carried through.

On the Thursday night, a large company of the principal bee-keepers attending the show, dined together in McAlpine's hotel. The party spent a very enjoyable evening, which was greatly enlivened by the songs and speeches of the various members.

For the American Bee Journal.

Another Way of Swindling, etc.

W. H. STOUT.

Parties in this vicinity have taken lessons in bee-keeping from a professional, who charges \$5. for instructions, and gives the following receipt for feeding:

5 lbs. A sugar, 1 teaspoonful fine dairy salt, ¼ lb. essence of lemon, 1 knife-point full cream tartar, 3 pints of water, to which add ½ tea cup full of vinegar, if you wish comb built.

The following for spring feeding: 2 bushels of rye, 5 lbs. A sugar, 3 spoonfuls of dairy salt, 1 teaspoonful essence of lemon, ¼ spoonful of cream tartar.

This is, of course, a kind of private mixture, but as the JOURNAL readers are entitled to all the valuable discoveries, I take the liberty to have you publish it, perhaps for the first time.

It is a little rough on foundation man-

ufacturers, I know, but you see a little vinegar will save us all that expense. How the little fellows are to appropriate the rye does not appear. For the present we are satisfied with A sugar and water, and rye and oats ground together for spring feeding. The other articles we would prefer mixed with flour for cakes.

We are disappointed in our honey crop; so far obtained only about 300 lbs. in sections from 19 colonies in spring, and increased to 32, of which several are yet only nuclei. During June it was very wet, yet white clover was plentiful, but as our bees cannot swim, to gather the honey, we got very little of it. Since June we had it dry enough, so that corn and potatoes will not make ¼ of a crop, and the grass looks as if scorched. We sowed some early buck-wheat for bee-forage, but it yields scarcely any honey, and less grain. We also have some of later sowing which may do a little better, if we get rain soon. On the whole, we had a season of extremes, the coldest winter, the wettest spring, the hottest and driest summer that is remembered—well, by the oldest inhabitant. We have a colony of bees now having 2 queens; the old queen has her wing clipped, and the bees swarmed out twice; each time we caught the queen, removed cells, and returned the colony; but they did not seem satisfied, but raised a young queen lately, and both were in the hive on one comb a few days ago. Another colony had a queen with defective wings; they also swarmed and returned twice, then superseded the old queen, and came out with 4 young queens at one time. We caught 3, gave them to nuclei, and left them 1; since, they have done well. From these instances, we infer that bees are sometimes averse to having queens that cannot fly.

Pine Grove, Pa., Aug. 22, 1881.

CONVENTION NOTES

The British Bee and Honey Show.

The seventh Exhibition of this Association in the gardens of the Royal Horticultural Society at South Kensington, London, has been rather conspicuous for the quantity and excellence of the honey than for evidences of progress among appliances. The total entries numbered 274, while the attendances have been on the whole satisfactory, and the interest in the subject evidently growing. In Class 2 the Carniolan bees were very distinct. This variety, though sombre in hue, should be encouraged, since they are good workers, not persistent swarms, and extremely mild in temper. Observatory hives brought out one or two impracticable novelties, and we were glad to see that the mistake was not repeated of giving prizes where large flight space involved wholesale death to the bees, being a necessary part of the construction. Mr. Holland showed a pretty and ingenious observatory, which at present partly involves this indicated defeat, which without difficulty he could remedy. Mr. Scott showed a hive in which the frames fit together, but have glass between the combs. These can be independently lifted for observation. In our opinion the old form of observatory, in which the combs are visible constantly and without interference, yet remains to be excelled.

The display of honey has not hitherto been equalled. The total weight was nearly 3 tons, while the flatness, finish, and color of the sections seemed to leave but little room for progress in this direction. The extracted honey was bright with hardly an exception, and must constantly have sorely puzzled the Judges in making their awards. For the best exhibition from one apiary Mr. Thorn was to the front with a magnificent lot of 384½ lbs.,

which with his other entries brought his total up to 528 lbs., by far the largest amount of English honey yet staged by one exhibitor. Mr. Walton came second with 227 lbs., and Mr. Hooker third with 14 dozen 1 lb. sections, all of admirably even quality. The next class for supers not sections was on the whole poor, and calls for little remark. The glass supers, handsome but unsalable, are clearly giving way before the handy sections. The cost and risk of transit, without a chance of sale, will in the end banish these ornaments from our exhibition benches.

Class 13, best twenty-four 2 lb. sections.—Mr. Walton surpassed Mr. Thorn with boxes that can only be equalled. Miss Guyton and Mr. Thorn were second and third in a class in which to win is an event.

The silver medal for foundation was replaced at the desire of the Judges for 2 of bronze, one for Mr. Raitt for thick foundation, and the other to Mr. Abbott for thin. A silver medal was awarded to Mr. Abbott, Jr., who showed Faris' method for making foundation by dipping. In this he displayed considerable dexterity, nearly if not all the sheets being turned out perfect. Mr. Cowan again won in the class for extractors. The machine in principle is that of last year with an additional movement by which the combs can be more readily put in position. Mr. Abbott showed an expeditious way of sealing honey jars. These are first coated with wax on the lip; waxed paper is then, after filling, pressed upon the glass; and the two surfaces of wax unite, and a complete closure is effected.

The Baroness Burdett Coutts distributed the prizes on Thursday, July 28th. The Rev. H. R. Peel has sufficiently recovered from his severe illness to allow him, to the delight of all, to be present during a part of the time the Exhibition was open. Mr. T. W. Cowan kindly taking general oversight during the whole week.

The bee-keepers of Ontario will hold their annual convention Tuesday, Wednesday, and Thursday evenings, second week of the Industrial fair, 13th, 14th, 15 September, thus allowing those attending the convention to see the exhibition when it is at its best and also the convention, which promises to be of such importance that no bee-keeper can afford to miss it. Ladies are especially invited to attend. Notice as to place of meeting will be given in due time. D. A. JONES.

The Southern California District Bee-Keepers' Association will hold its annual meeting in Los Angeles City, Sept. 8, 9, and 10, 1881. All persons interested in bees and honey are respectfully invited to attend.

J. E. PLEASANTS, Pres.
Anaheim, Cal.

The Northwestern Bee-Keepers' Association will meet in Chicago, on Tuesday and Wednesday, October 25 and 26. All bee-keepers are cordially invited to attend. It is desired to make this one of the most interesting conventions ever held in the United States. C. C. MILLER, M. D., Pres.
C. C. COFFINBERRY, Sec.

The Eastern Michigan bee-keepers' Association will hold its fall meeting in Detroit, Oct. 4, in the Y. M. C. A. hall, at 10 o'clock a. m.
A. B. WEED, Sec.

The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting in Platteville, Grant Co., Wis., Nov. 30, 1881.
N. E. FRANCE, Sec., Platteville, Wis.

The Northern Michigan Bee-Keepers' Association will hold its fourth Annual Convention at Maple Rapids, Clinton Co., Mich., Oct. 11 and 12, 1881. O. R. GOODNO, Sec.

SELECTIONS FROM OUR LETTER BOX

Thoroughwort.—I send by this mail a specimen of a weed that grows here in wet land, about waist-high, and which blooms from the middle of August until frost. It has a small white flower, on which the bees work steady all day long. What is it? Some here call it boneset; the tea of it will vomit a person quickly. My bees worked on it so industriously last fall, I thought maybe the impure, sour honey came from it that caused dysentery. It is very dry here now, and the bees that had plenty of stores the first of July have used at least one-half in rearing brood, and have gathered none since. I observed in last week's BEE JOURNAL, that men differ greatly on the value of the Cyprian bee. While Mr. Dadant condemns them, Mr. Muth and others praise them, so that beginners hardly know which to purchase. I have four as fine queens as I ever owned, of the Cyprian variety, bred from imported mothers; they breed faster, and their progeny are as gentle and easy to handle as Italians, and just as good workers. I prefer the Cyprians. Success to the BEE JOURNAL. D. S. KALLEY. Mansfield, Ind., Aug. 23, 1881.

[The specimen sent is thoroughwort or boneset (*Eupatorium perfoliatum*), and is an excellent honey plant.—Ed.]

Weather Scorching but Sweet Clover Yielding Honey.—I have read Dr. Keene's letter in a late Journal about Rocky Mountain bee plant and sweet clover. I have had 75 to 100 large plants of sweet clover in bloom in our garden this summer, the bloom upon which was immense. It bloomed in June, and when at its best, the bees were very busy upon it about a week, when to my great surprise, they abandoned it and let it alone for over a month, and I concluded it was worthless for this locality. Then came the drouth with no rain for over 3 weeks, when I was again surprised by seeing the bees resume work upon sweet clover, and during the hottest and driest day we had, with the mercury 104 in the shade, and a dry, scorching wind from the southwest, they worked upon sweet clover from morning until night continuously. Of its value as a honey plant I cannot speak from experience, except that I am sure it cannot be so dry that sweet clover will not yield honey. D. P. NORTON. Council Grove, Kan., Aug. 22, 1881.

Light Honey Crop.—The honey crop will be a very light one here this season, though early in the season it bid fair to be good. We obtained a little surplus honey from basswood bloom. Our bees have swarmed well this season; one colony gave me 3 large swarms in 4 days. It is so dry here now that there is nothing for bees to work on. If it rains, which it has not done in 3 weeks, I think it is too late for much forage. Everything looks as though it had been scorched. I wish all who have sent money to H. A. Burch & Co., for aparian supplies, or bees and queens, and have received no compensation for their money, in the last year, could be put in a list, so we could see how much money they have made out of bee-keepers. I will add my mite: In April last I sent \$3.50 for a nucleus, but have no bees yet. They do not correspond any more; they say each will be served in turn. I think it is about time to class such men where they belong. DAVID RICE, SR. Richfield, Ill., Aug. 16, 1881.

Drouth in Texas.—We are suffering from a most protracted drouth. My bees have hardly gathered $\frac{1}{2}$ of a crop. We are all somewhat discouraged. W. H. ANDREWS. McKinney, Tex., Aug. 16, 1881.

The Docility of Cyprians.—While I have no experience with imported Cyprians, I introduced to my yard in June 2 home-bred queens of this strain, presumably fertilized with the Cyprian drone. I am glad to be able to concur in the testimony of Mr. Muth—that I find them not only handsome, but "as gentle as any to handle." I certainly think it would be well for us to go on with the infusion of this new blood, notwithstanding the exceptional cases of wrathfulness reported by Mr. Dadant and others. I cannot believe that they will prove in the average more irascible than the blacks, while any improvement that may result from the cross will not be at the expense of the beautiful marking of the Italians. J. S. WOODBURN. Livermore, Pa., Aug. 21, 1881.

Cellar Ventilation.—I have read in some of our bee publications that a cellar should have a ventilating tube enter it from below the frost line in the ground, and extending some distance to an opening. Will some one having such a ventilating tube give the size of orifice, and the length necessary to secure a uniform temperature during severe weather? J. H. MARTIN. Hartford, N. Y., Aug. 20, 1881.

Much Interested.—I am very much interested in anything touching bee culture; I therefore find the BEE JOURNAL exceedingly attractive and instructive, and would not like to miss a number of it. G. E. T. KYBER. Green Bay, Wis., Aug. 22, 1881.

100 lbs. per Colony.—In my report given on page 226, July 20, is a little mistake. I lost 31, or rather 32 colonies out of 87. I have now increased to 92, and am getting a fair surplus. I shall get considerable over 100 lbs. of box honey from each of several colonies in the spring. The honey crop in this part of Wisconsin is very light. The harvest, truly, has been great, but the laborers have been few. B. T. DAVENPORT. Auroraville, Wis., Aug. 22, 1881.

Another Swindler.—I have received the following letter: "Please give me information, if you can, namely: Is there a National Bee Co., if so do they establish agents to sell their goods? Is there a patented bee hive called Kidder hive? A man called himself Kirk Kidder, Jr., selling territory to use this patented hive. Was he a bogus or a genuine representative of the Co.? He said you was their agent at Cincinnati, O.—C. HAUCKE.—Greenup, Ky., Aug. 20, 1881."

There is a fellow by the name of Kidder, I believe Kirk Kidder, Jr., who makes himself unpleasant, and whom I can prove to be an impostor and a humbug, by a number of letters on hand. As he is using my name in his swindling concern, I am obliged to speak in plain language, as my time is taxed answering letters in regard to that man, a little more than I can stand. The BEE JOURNAL will please publish Mr. Haucke's letter of inquiry which I enclose, and my answer, as follows:

MR. HAUCKE:—Your favor at hand, asking me if there is a National Bee Co., and a patented Kidder bee hive. You say also that I am the agent of that company, in Cincinnati, as stated by Kirk Kidder, Jr. To this I reply that a National Bee Co. may exist in the brains of your Mr. Kidder, but that it does not amount to a row of pins to the rest of the world, just like the patent on his bee hive; there is no such patent, and he cannot make you pay anything. If he tells you I am the agent of anybody, he tells you a lie, and you had best treat that humbug as he deserves, i. e., "boot him out doors." I have had so many letters in regard to that fellow that I intend to use plain language in regard to him, especially since he is using my name in his nefarious business. To

other parties he has stated that a suit against me for infringing on his patent is pending in the United States court. C. F. MUTH. Cincinnati, O., Aug. 24, 1881.

[We have occasion to know that this man "Kidder," is a swindler. He has troubled us the same way.—Ed.]

Distance Between Frames.—In Prof. Cook's "Manual," page 136, eighth line from the top, in his instructions about the distance frames should be from each other, he says " $\frac{1}{4}$ of an inch, though a slight variation either way does no harm." Again, on the same page, 2 or 3 lines below, he says "some men prefer nails or wire staples which project just $\frac{1}{4}$ of an inch," etc. I would like to have him tell us how he handles frames and keeps bees in his hives with only $\frac{1}{4}$ inch space between the combs. I find, in practice, that not less than $\frac{1}{2}$ inch will do, and I find 9 frames in the Langstroth hive do better than 10. I have used only 9 for 2 years past, and like it much better, but only $\frac{1}{4}$ inch is, I think, a very great error, and will make bad work for beginners, for I know in practice it will not work with me, and I would like very much to have Prof. Cook tell us, through the BEE JOURNAL, how he manages his hives, when full of bees, with only $\frac{1}{4}$ inch space or less between the frames. S. H. HUTCHINSON. Mechanics Falls, Me., Aug. 8, 1881.

[I have to thank S. H. Hutchinson for calling my attention to the above mistake in the Manual. I noticed it in the second edition (it was not in the first), and intended to correct it, but by some oversight the correction was not made. I regret the error, as errors are to be deprecated at all times and in all places. Yet the above is not serious, as the advice can hardly be followed. I always have given $1\frac{1}{2}$ inches to each frame, or 12 frames to a hive 18 inches long.—A. J. COOK.]

The Bee Moth.—I see in the report of the proceedings of the convention of the Barren Co., Ky., society, that among other subjects submitted to that body for discussion, was, "Can we manage bees so that the moth worm will not destroy them?" The answer to that question might have been made up of one word of 2 letters. The "cattle men" of west Texas met in convention, at Fort Worth, in this State, one day last May. Now, had the question, "Can we manage cattle so that the buzzards will not destroy them?" been submitted to that body for its decision, the same answer of one word of 2 letters would have been literally correct, and for the same reason. My object is to draw out a discussion upon the (among bee-keepers) "king of terrors," the greatly misunderstood, and comparatively harmless little, so called, bee moth. Here in the south a great cloud of ignorance on the moth question hangs over us like a hideous nightmare, and prevents thousands from keeping bees, and worst of all, enables ignorant, or unscrupulous, moth-trap vendors to impose on our harmless and confiding people. W. H. ANDREWS. McKinney, Texas, Aug. 22, 1881.

My Report.—Last spring I brought with me from the Eastern part of the state 12 colonies of bees; 7 of them had scarcely the strength of good nuclei prior to May 1st. Being well through with their stores, 30 lbs. of sugar was made into syrup, and fed to them in April and early May, during which time also the colonies were equalized—so far, at least, as enabled me to utilize to the full the laying capacities of the queens. As their summer's work, I am able to report 1,165 lbs. of honey, mostly extracted, and 27 swarms. Counting nuclei, my number to-day is 49; but they occupy

only 39 stands, and it is to this number I expect to reduce my colonies after the present batch of queens is disposed of. As many have quite a surplus of honey on them yet, and as all are still storing slowly from the buckwheat and fall flowers, I am not troubled with visions of having to feed to any extent, to enter them "in good condition" for winter. But should the surplus of my honey gatherers not prove sufficient for the lack of my queen rearers? I have still some \$30 proceeds of queens already sold, and more to come with which to buy a little sugar. Of the 10 colonies devoted to the extractor, 2 gave me 193 and one 184 lbs. of honey, and 3 swarms respectively. The 2 at the other end of the class gave me 109 and 78 lbs. of honey and one swarm each. The credit of this season's handsome yield (the best in my 10 years of bee-culture), I would gratefully and humbly accord as follows: 1st. Providence; 2, Italian bees; 3, plenty of empty comb, and 4, management. J. S. WOODBURN. Livermore, Pa.

Sections with Wood instead of Glass.—I send a section box protected by wood sides which are fastened to the section by what I call a "hinged label." I commenced the use of wood sides instead of glass some 3 years since, and fastened them to the section by a light rubber band, till this season, when I happened to devise this label. The rubber band did very well, but I wanted something to cover up the little stain of propolis, sometimes left on top of the section, and also to prevent the end of the wood-side slipping down into the honey, which sometimes happened when the sections were carelessly handled. This "hinge label" does very effectually, and also gives the section a neat appearance. I fasten them on with white glue, the same as I use for glassing, only thinner. Our city grocers liked the wood sides fastened by rubber bands, far better than glass, as it is so much less liable to break up by their delivery teams, and now they like the "hinge labels" best of all. To examine the honey, simply raise the lid or side from the bottom, the label acting as the hinge. Of course I always glass a few sections for the grocers to put upon counters, in show windows, etc., but they all say, "give us the wood sides for delivery." How do you like them? GEO. I. GOODHUE. Danville, P. Q., Can., Aug. 22, 1881.

[This is a very clean and nice section, and where it is not desired to glass the sections, and some cover or protection is wanted other than the crate, these "wood sides" are very convenient.—Ed.]

My Hopes almost Blasted.—My 13 colonies of bees wintered without loss on summer stands, only I lost 2 old queens in February. I put the brood in with others, and then I had 11, in good condition; but the quantity of bees in each hive was small (about 2 quarts); they multiplied fast, and in the latter part of May and June, by natural swarming, they increased to 21 colonies, and to-day every hive is full of bees, comb, brood in every stage, and honey. I do not know how much. For 5 weeks we have had no rain, and with hot and dry weather; a great portion of the time, it was 100° to 110° in the shade in my apiary, and on the 12th inst., it was 112° in the shade, and 150° in the sun, at the entrance of hive No. 7, at noon. It seems to me that the "blessed bees" are now living on bread and water, although I have 3 acres of silver-hull, golden rod, figwort, etc. I have obtained about 100 lbs. from white clover. I sell all my honey at 30 cts. per lb. Famine is staring my bees squarely in the face. If it rains in a few days, they will be all right. The wheat crop is light; corn is tolerably good; vegetables are very scarce, and honey is a failure. R. M. OSBORN. Kane, Ill., Aug. 22, 1881.

SPECIAL NOTICES.

Single copies of the JOURNAL sent postage paid for 5 cents each.

Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Articles for publication must be written on a separate piece of paper from items of business.

Photographs of prominent Apiarists—Langstroth, Dzierzon, and the Baron of Berlepsch.—Price 25 cents each.

When changing a postoffice address, mention the old as well as the new address.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

The Beauty and Color of the hair may be safely regained by using Parker's Hair Balsam, which is much admired for its perfume, cleanliness, and dandruff eradicating properties. 31w4

Nearly all the ills that afflict mankind can be prevented and cured by keeping the stomach, liver and kidneys in perfect working order. There is no medicine known that will do this as quickly and surely, without interfering with your duties, as Parker's Ginger Tonic. See advertisement. 31w4

A Sample Copy of the Weekly BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Examine the Date following your name on the wrapper label of this paper; it indicates the time to which you have paid. Always send money by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

Premiums.—For a club of 2, weekly we give a copy of "Bees and Honey;" for a club of 5, weekly, we will give a Cook's Manual, a Bee-Keeper's Guide, bound in cloth; for a club of 6, we give a copy of the JOURNAL for a year free. It will pay to devote a few hours to the BEE JOURNAL.

It would save us much trouble, if all would be particular to give their post office address and name, when writing to this office. We have letters (some inclosing money) that have no name, post-office, County or State.—Also, if you live near our postoffice and get your mail at another, be sure to give the address we have on our list.

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums:

For a Club of 2,—a copy of "Bees and Honey,"
" 3,—an Emerson Binder for 1882.
" 4,—Cook's (Bee) Manual, paper, cloth.
" 6,—Weekly Bee Journal for 1 year.

We have a SPECIAL EDITION of the Weekly BEE JOURNAL, just as it will be published in 1882 (16 pages), for distribution at Fairs, Conventions, etc. Any one who may desire to distribute them to bee-keepers will be supplied free, in any quantity they may be able to judiciously use.

Honey and Beeswax Market.

BUYERS' QUOTATIONS.

CHICAGO.

HONEY—New honey is coming in freely and the demand is good.
We quote light comb honey, in single comb boxes, 15¢; in larger boxes 2¢ less. Extracted 7¢.

BEESWAX—Prime quality, 18¢. 20¢.
AL. H. NEWMAN, 972 W. Madison St. Chicago, Aug. 20, 1881.

NEW YORK.

HONEY—There is no settled market price yet for honey, as there is none selling.
We quote as follows: White comb, in small boxes, 15¢; in larger boxes, 12¢. Extracted, white, 10¢; dark, 7¢.
BEESWAX—Prime quality, 22¢. 24¢.
THORN & CO., 11 and 13 Devco avenue. New York, Aug. 18, 1881.

CINCINNATI.

HONEY—Last week I paid King Cramer 17¢, per lb. for a lot of about 2,000 lbs. It was in the Muth sections, 54x5, without separators. Every comb is perfect, which speaks well for the producer. If Mr. Cramer did not succeed, this season, in establishing rates for queen fertilization, he succeeded admirably in getting one of the finest lots of comb honey in the country. Extracted honey is just commencing to be in good demand.
I quote: Good comb honey, in sections, is worth 14¢. on arrival. Extracted, 7¢. on arrival.
BEESWAX—18¢. 22¢, on arrival. I have paid 25¢. per lb. for choice lots. C. F. MUTH. Cincinnati, Aug. 13, 1881.

ST. LOUIS.

HONEY—An occasional sale at quotations, but demand very light and prices easy.
We quote: New, strained, 7¢. 8¢; extracted, in cans, 9¢. 10¢; comb, 13¢. 14¢.
BEESWAX—Prime yellow sells at 20¢. 21¢.
R. C. GREEN & CO., 117 N. Main Street. St. Louis, Mo., Aug. 27, 1881.

BOSTON.

HONEY—The prices of honey are not regularly quoted in our papers here. We quote: Honey in 1 pound sections retails at 25¢; in 2 pound sections, 20¢.
BEESWAX—Prime quality, 25¢.
CRUCKER & BLAKE, 57 Chatham Street, Boston, Mass., Aug. 17, 1881.

CLEVELAND.

HONEY—Comb honey continues in good demand at 19¢. 20¢. for 1 lb. white and 18¢. 19¢. for 2 lb. sections. Glass sections about 3¢. per lb. less. Extracted honey, in 30 to 50 lb. cans, 10¢. 12¢.
BEESWAX—20¢.
A. C. KENZEL, 115 Ontario Street. Cleveland, O., Aug. 25, 1881.

SAN FRANCISCO.

HONEY—An invoice of 267 cases and 7 bbls. was forwarded this week to Liverpool, shipped by a packing firm. The market is quiet, but holders are not disposed to shade rates.
We quote white comb, 14¢. 15¢; dark to go, 4.1¢. 13¢. Extracted, choice to extra white, 9¢. 10¢. 12¢; dark and candied, 7¢. 8¢.
BEESWAX—20¢.
STEARNS & SMITH, 423 Front Street. San Francisco, Cal., Aug. 13, 1881.

BALTIMORE.

HONEY.—Both the supply and demand are too meager to report.
BEESWAX.—Southern, pure, 21¢. 23¢; Western, pure, 22¢; grease wax, 12¢. 13¢.—Baltimore Market Journal.

Local Convention Directory.

1881. Time and Place of Meeting.
Sept. 27—Eastern N. Y. Union, Knowersville, N. Y.
N. D. West, Sec. Middleburg, N. Y.
Oct. 4—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec. Detroit, Mich.
6—Union Kentucky, at Shelbyville, Ky.
G. W. Demaree, Sec. Christiansburg, Ky.
5-7—National, at Lexington, Ky.
Dr. E. Parry, Sec. New York City.
12—Kentucky State, at Louisville, Ky.
O. R. Goodno, Sec. Carson City, Mich.
11, 12—Northern Michigan, at Maple Rapids.
11, 12—Northwestern Wis., at Pewaukee, Wis.
Frances Dunham, Sec. DePue, Wis.
12—Central Ky., in Exp. B'dg. Louisville, Ky.
W. Williamson, Sec. Lexington, Ky.
25, 26—Northwestern District, at Chicago, Ill.
C. C. Coffinberry, Sec. Chicago, Ill.
27—Central Michigan, at Lansing, Mich.
George L. Perry, Sec.
27—Western Mich., at Berlin, Mich.
Wm. M. S. Dodge, Sec. Coopersville, Mich.
Nov. 30—S. W. Wisconsin, at Platteville, Wis.
N. E. France, Sec. Platteville, Wis.
1882.
Jan. 10—Cortland Union, at Cortland, N. Y.
C. M. Bean, Sec. McGrawville, N. Y.
25—Northeastern, at Utica, N. Y.
Geo. W. House, Sec. Fayetteville, N. Y.
April 11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec. Detroit, Mich.
27—Texas State, at McKinney, Texas.
Wm. H. Howard, Sec.
May —Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

QUEENS! QUEENS!

One Dollar will buy one of our beautiful Italian, Cyprian, Holy Land or Hungarian Queens, which select the very best, from 200 queens, for \$1.50 each, all warranted pure and safe arrival by mail guaranteed. Send for 20th circular.

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Wenham, Mass.

TIN PAILS FOR HONEY.

These Pails have a full cover, and are excellent for marketing Candied Honey. The gallon and half gallon pails have a bail or handle, the quarts and pints have none.

Assorted samples of the four sizes, put inside one another as a nest, price 50 cents. These pails are very useful for many other purposes, after being emptied of the honey by consumers. The following are the prices:

| | Per Doz. | Per 100 |
|----------------------------------|----------|---------|
| Gallon, holding 10 lbs. of honey | \$1.80 | \$12.00 |
| Half Gallon, " 5 " " | 1.50 | 9.00 |
| Quart, " 2 1/2 " " | 1.20 | 7.00 |
| Pint, " 1 1/4 " " | .75 | 4.00 |

ALFRED H. NEWMAN,

972 West Madison Street, Chicago, Ill.

EMERSON BINDERS.



Binders for the Weekly Bee Journal of 1881, cloth and paper, postpaid, 55 cents.

We can furnish Emerson's Binders, gilt lettered on the back, for AMERICAN BEE JOURNAL for 1880, at the following prices, postage paid:

Cloth and paper, each.....50¢.
Leather and cloth.....75¢.
We can also furnish the Binder for any Paper or Magazine desired.

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If you are wasting away with Consumption, Debility or any weakness, you will find Parker's Ginger Tonic the greatest Blood Purifier and the Best Health & Strength Restorer you can use. It is a powerful Bitter and other Tonic, as it builds up the system, but never intoxicates, so it is safe for all. H. C. & Co., Chemists, N. Y.

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Removes Dandruff. Prevents Baldness. Restores Color.

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GOLD MEDAL Awarded the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self Preservation," bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only \$1.25 sent by mail; illustrated sample, 6¢; send now. Address: Fenwick Medical Institute or Dr. W. H. PARKER, No. 4 Bulfinch St., Boston.

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A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.
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The Bee-Keeper's Guide;

OR,

MANUAL OF THE APIARY,

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Of Lansing, Professor of Entomology in the State Agricultural College of Michigan.

320 Pages; 133 Fine Illustrations.

This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months—a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee; the races of bees; full descriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—L. Apiculture, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—British Bee Journal.

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYKHOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—MICH. FAR.

Is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without.—Nebraska Farmer.

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—Herald, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D.

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-keepers.—Ky. Live Stock Record.

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the Bulletin D'Apiculture, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—Democrat, Pulaski, N. Y.

We have perused with great pleasure this *volume* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—Agriculturist, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—Western Agriculturist.

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowledge of apiarists, which he uses admirably to promote and make popular the most interesting of all occupations.—American Inventor.

It may safely be pronounced the most complete and comprehensive of the several manuals which have recently appeared on the subject of bees and their handling in apiaries. The studies of the structure of the bee, the different varieties, the various bee products, and following these the points of management, extending to the smallest details, are all of high and practical value. Prof. Cook has presented the latest phases of progressive bee-keeping, and writes of the themes discussed in the light of his own experience.—Pacific Ruralist.

Of the many excellent works which we have examined on bee-culture, we consider Prof. Cook's the most valuable for the study of those who contemplate going into the business or are already keeping bees. If thoroughly studied, and its teachings conformed to, by the apiarist, who exercises a reasonable degree of common sense, he or she cannot fail to achieve at least a reasonable degree of success. The author addresses himself to the work with a degree of enthusiasm which carries the reader with him to the end.—Kansas Farmer.

Cook's Manual of the Apiary holds in America the same high rank, that is accorded in Germany to the book of which Dzierzon is the author; the only difference being that Prof. Cook's Manual combines the profoundness of the German pastor with the superiority of the practical American. He refers in several instances to Darwin; and does not belong to that class which hates everything that is foreign, for he speaks of German naturalists with great reverence.—German Freidenker, Milwaukee, Wis.

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THOMAS G. NEWMAN,

974 West Madison Street, CHICAGO, ILL.

THE AMERICAN BEE JOURNAL

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Contents of this Number.

Editorial:

| | |
|--------------------------------|-----|
| Editorial Items..... | 273 |
| Borage..... | 273 |
| Lecture at St. Joseph, Mo..... | 273 |
| Indiana State Fair..... | 273 |
| Local Fairs..... | 273 |
| Taking him at His Word..... | 273 |

Among our Exchanges:

| | |
|-----------------------------------|-----|
| The Uses of Honey..... | 274 |
| How, What and When to Feed..... | 274 |
| Pasture for Bees a Necessity..... | 274 |
| Management of Comb Honey..... | 274 |
| Clover as a Fertilizer..... | 274 |

Correspondence:

| | |
|--|-----|
| How to Winter Bees Successfully..... | 275 |
| How to Get Rid of Fertile Workers..... | 275 |
| The Degeneration of Bees..... | 275 |
| A Model Prize List for Fairs..... | 276 |
| Introducing Queens..... | 276 |
| Improving Honey Plants..... | 276 |
| A Few Interesting Facts..... | 276 |
| Origin of Sending Queens by Mail..... | 276 |
| Cyprian and Palestine Bees..... | 277 |
| The Caledonian Apian Society..... | 277 |
| Another Way of Swindling..... | 277 |

Convention Notes:

| | |
|---------------------------------|-----|
| British Bee and Honey Show..... | 277 |
| Bee-Keepers' Union..... | 274 |

Selections from Our Letter Box:

| | |
|--|-----|
| Thoroughwort..... | 278 |
| Weather Scorching, Sweet Clover..... | 278 |
| Yielding Honey..... | 278 |
| Light Honey Crop..... | 278 |
| Drouth in Texas..... | 278 |
| The Locality of Cyprians..... | 278 |
| Cellar Ventilation..... | 278 |
| Much Interested..... | 278 |
| One Hundred Pounds per Colony..... | 278 |
| Another Swindler..... | 278 |
| Distance Between France..... | 278 |
| The Bee Moth..... | 278 |
| My Report..... | 278 |
| Sections with Wood instead of Glass..... | 278 |
| Hopes almost Blasted..... | 278 |

We received, too late for insertion in the programme of the National Convention, information that Mr. W. T. Stewart, of Eminence, Ky., will furnish an article on "The Cultivation of Honey-Producing Plants."

It will pay to devote a few hours in getting up a club for the BEE JOURNAL. Read the list of premiums on page 15. Every bee-keeper should carefully examine this JOURNAL.

CYPRIONS ONLY.

I will sell 4-frame (Langstroth) Nuclei, with Untested Cyprian Queen, for \$4; with Tested do., \$5. Ready now. Bees by the pound, at 75c.

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For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

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34w13t

FREE! A sample copy of the *New England Bee Journal*. H. Poole, Mechanic Falls, Me.
35w1t

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The following letter explains itself:
A. H. NEWMAN, Esq., Dear Sir: No. 4 Excelsior Honey Extractor (with three-sided comb basket), received to-day and tested. I find it EXCELLENT. I can take from my hives, extract, and return frames at the rate of 100 pounds per hour. Do not know how long I could keep up at that rate. If this isn't work, it resembles it very much.
Truly yours, J. M. SHUCK.
Des Moines, Iowa, July 30, 1881.



Sizes and Prices of Extractors:
No. 1—for 2 Langstroth frames, 10x18 inc. \$8.00
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No. 4—for 3 frames of any size, 12x22 inc. 12.00
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I can now furnish ITALIAN QUEENS, BY RETURN MAIL, at the following prices:

Tested Queens.....\$1.50
Warranted Queens.....1.00
Cyprian Queens, untested.....1.00
As most all the Dollar Queens I sold last year were pure, I will warrant them this year. J. T. WILSON,
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31w5t

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28w1t

Rev. A. SALISBURY

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Warranted Italian Queens, \$1.00; Tested Italian Queens, \$2; Cyprian Queens, \$2.00; Tested Cyprian Queens, \$4; 1 frame Nucleus, Italians, \$4.00; 1 frame Nucleus, Cyprians, \$5; Colony of Italians, 8 frames, \$5.00; Colony of Cyprians, 8 frames, \$10.00. Wax worked 10c. per lb. Pure Comb Foundation, on Dunham Machine, 25 lbs. or over, \$1. Send for Circular. 1w1y



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Sole Manufacturers,
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The British Bee Journal,

AND BEE-KEEPER'S ADVISER.

The *British Bee Journal* is published monthly at \$1.75, and contains the best practical information for the time being, showing what to do, and when and how to do it. C. N. ABBOTT, Bee Master School of Apiculture, Fairlawn, Southall, London.

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To secure prompt attention, money should be sent by New York draft or post office money order. No discount from above schedule.
Address all communications to:
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Pewamo, Ionia Co., Mich.
25w1t

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The first chider-proof bellows smoker.
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The first complaint yet to be received.
The first smoker yet to be returned.

The first thing for bee-keepers to do, to save imposition and money, and be happy and safe, is to send a card for testimonials, or half-dozen rates, to
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ABRONIA, MICH.

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and one that works with

RAPIDITY AND SATISFACTION.

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Dominion of Canada.

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30w1y Patentee and Proprietor, Spring Hill, Tenn.

FOR SALE.—3-horse Engine and Boiler—new, complete. Price, \$100. Also, Tested Italian and Cyprian Queens, \$1.50 each. Send for Circular. Address, **REV. J. S. WOODBURN,**
35w1tp Livermore, Westmoreland Co., Pa.

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Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—Entirely re-written, elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. Cloth, \$1.25; paper cover, \$1.

Quinby's New Bee-Keeping, by L. C. Root.—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—\$1.50.

Novice's ABC of Bee-Culture, by A. I. Root.—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, \$1.25; paper, \$1.

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, \$1.00; paper, 75c.

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, \$2.

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, \$1.00.

Bees and Honey; or, successful management of the Apiary, by Thomas G. Newman.—This embraces the following subjects: Location of the Apiary—Honey Plants—Queen Rearing—Feeding—Swarming—Dividing—Transferring—Italianizing—Introducing Queens—Extracting—Quieting and Handling Bees—Marketing Honey, etc. It is published in English and German.—Price for either edition, 40 cents, postpaid.

Bee-Keeping Theory—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. 15c.

Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc.; and Honey as Medicine with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in English and German. Price for either edition, 6c. per dozen, 50c.

Wintering Bees.—This contains the Prize Essays on this subject, read before the Centennial Bee-Keepers' Association. The Prize—\$25 in gold—was awarded to Prof. Cook's Essay, which is here given in full. Price, 10c.

The Hive I Use.—Being a description of the hive used by G. M. Doolittle. Price, 5c.

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by C. & C. P. Dadaud, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price 15c.

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, 10c.

Food Adulteration—What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 20 pages. 5c.

Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It contains a table of doses, and much valuable horse information. Paper, 25c.

Ropp's Easy Calculator.—These are handy tables for all kinds of merchandise and interest. It is really a lightning calculator, well bound, with slate and pocket. Cloth, \$1; Morocco, \$1.50.

Chicken Cholera, by A. J. Hill.—A treatise on its cause, symptoms and cure. Price, 5c.

Moore's Universal Assistant, and Complete Mechanic, contains over 1,500,000 Industrial Facts, Calculations, Processes, Trade Secrets, Legal Items, Business Forms, etc., of vast utility to every Mechanic, Farmer and Business Man. Gives 24,000 Items for Gas, Steam, Civil and Mining Engineers, Machinists, Millers, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronzers, Gliders, Metal and Wood Workers of every kind.

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THE AMERICAN BEE JOURNAL

ESTABLISHED
IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND THE PRODUCTION AND SALE OF PURE HONEY.

VOL. XVII.

CHICAGO, ILL., SEPTEMBER 7, 1881.

No. 36.

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The Honey Season of 1881.

It is, perhaps, rather early in the season to conjecture with any degree of certainty as to the honey-harvest for 1881; but enough is already known to justify the assertion that the yield, generally, has been very satisfactory. In a territory so vast as that of North America, embracing, as it does, every variety of soil and every degree of climate, it cannot be anticipated that each portion will be equally productive even in the most favorable season, nor will all parts be unproductive alike in times of general failure. These remarks are quite as applicable to the production of honey as any other commodity, and the present season has very forcibly illustrated it.

From all portions of the country we learn that the white clover bloom was unusually profuse and the linden was much above the average, while less important honey blossoms were quite as satisfactory; but owing to the decimation of the bees during the past winter and spring, but few apiarists were prepared to take advantage of the bloom in time to secure the best results. Those, however, who were in condition to make the most of it, are more than jubilant over their yield.

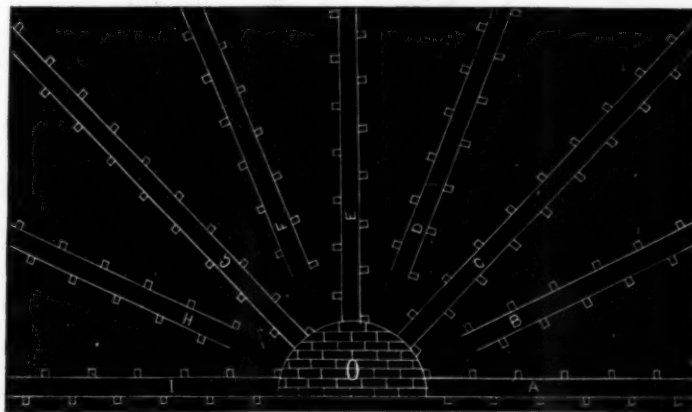
The summer harvest, however, has not been so generally satisfactory. In several of the Southern, and particularly in the Central States, a drouth of long duration set in about the middle

of June, which continued in many States till the last week in July, and entirely suspended the honey flow. Later, the drouth struck Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Missouri, and districts in other States. This, to a large extent, will be detrimental to the fall honey yield, and yet, with immediate general rains and tardy frosts, we anticipate a more than average fall honey crop.

The increase in bees has been remarkable everywhere, both by natural swarming and by division—some having increased tenfold. Bee-keepers are almost unanimous in reporting colonies in strong and excellent condition, and in most cases with plenty of honey for winter; therefore, whatever

dile-men or jobbers; these men, with an eye to business, will drive the most advantageous bargains. It is mainly attributable to a nervous anxiety on the part of producers to sell.

Notwithstanding the disasters of the past winter, bee-keepers in general have occasion to congratulate themselves on the results of the year's work. Where cold, rigorous winter killed the bees, there also did it destroy cattle, sheep and hogs, or consume nearly their value in feed to carry them through; where storms and hurricanes have wrought to their disadvantage, other descriptions of property have been flooded or ruined, and even human life has not been exempt from destruction; where drouth has inter-



Dr. L. C. Whiting's Plan for an Apiary.

there may be to gather in the fall bloom, will be harvested to the best advantage, and may yet be a considerable addition to the season's report.

As we advised our readers in the early portion of the season, prices for honey are good, and the tendency is upward. This is not the result of a short crop, for the crop is not short, but is fully up to the average; nor is it the natural sequence of a partial failure in the California yield. It is the result of an increased demand for good honey at home and abroad. No longer does prime honey beg a market, but is eagerly sought for, and finds a ready sale. Every price current in each considerable mart gives quotations, and nearly all the metropolitan dailies publish prices in their market reports. That these prices fluctuate and vary greatly with each other cannot be attributed to the absence of a demand, nor is it the fault of the mid-

rupted the bees in their labors, fruit has been shriveled where it hung, corn parched in the fields, cotton shrunken and burned before matured, and general, pinching want stares the hard-working husbandman in the face. All in all, bee-keepers in general have less cause for despondent gloom than any other chosen occupation in America, involving a relative amount of capital.

Unfortunate.—We are in receipt of the following note from Mr. J. T. Wilson, dated Mortonville, Ky., Aug. 30, 1881:

I received an injury last Saturday morning from the falling of an old shed, and for twenty-four hours did not know anything that transpired. The doctor thinks I had better keep out of the sunshine for a while, so if my patrons do not receive their queens this week, they will know the cause.

Our readers will join with us in sympathy for Mr. Wilson in his misfortune.

Plan for an Apiary.

Dr. L. C. Whiting has furnished us with the following description of a plan for an apiary, which will be found delineated in the engraving on this page:

After looking at the engraving, in No. 27, of Mr. Root's picturesque apiary, I thought of sending you a draught of a plan adopted by me some years since, which for some reasons gave me more satisfaction than any other.

It will be seen from the accompanying engraving that the hives radiate from a central point, in double rows, about 5 feet apart. These spaces are for passage-ways, and from which the bees are manipulated. The front (or entrance) faces out from this passage-way.

The point gained by this arrangement is the facility of seeing any unusual action among the bees. I could stand at the hub and glance down each row and see if any robber bees were threatening any colony, and in swarming time I could see from which colony the bees issued, with the least expense of labor or time.

When I commenced bee-keeping I thought it necessary to have the hives 5 or 6 feet apart each way, but want of room caused them to be placed nearer, and I now find one foot apart in the rows to give ample room.

East Saginaw, Mich., July 20, 1881.

Mr. Henry Jones, of Chesaning, Mich., presented a box of honey to the editor of the *Oakley Cyclone*, who "noticed" the honey in the following words:

Mr. Jones, of Chesaning, will please except our thanks for a cap of that superb honey of his, which he kindly presented to us, and which was pronounced immense by all the young *Cyclones* in the family, which includes one little zephyr, and several small whirlwinds.

That little local notice will do much to assist Mr. Jones to sell his honey at home, and thus create a local market for years to come. We cannot give better advice than to keep the local market well supplied—send up only the overplus to the large marts.

A commercial exchange says that the American honey trade with Great Britain is growing rapidly. A recent English order calls for 58,000 one-pound cans of pure extracted honey.

Mr. Fisk Bangs, of South Haven, Mich., who resides in the great fruit belt along the lake, gives the dispiriting information of the "almost total failure of the peach crop. Apples, too, except close to the lake where he lives, are reported almost nil."

The Old, Old Story.

We cannot resist the temptation to publish the following:

South Haven, Mich., Aug. 30, 1881.
We regret that the management of both the *AMERICAN BEE JOURNAL* and *Gleanings* should have resolved upon such action as they have, resulting in our financial embarrassment. Presume it's no use for us to repeat that we are paying fast as we can.

H. A. BURCH & Co.

We can assure Mr. Burch that we did not "resolve upon such action" until the complaints against him became so numerous that we could no longer doubt much of his business was tinctured with "crookedness" (to put it mildly). For nearly two years we have heard more or less of complaint, and have remonstrated with him for his lack of promptness; but more recently we have been much censured for carrying his name in our advertising columns, which we should not have done had we not supposed he was at least honest; but when statements of his derelictions were received, subscribed and sworn to by numerous victims, "the management" could not do otherwise than "resolve upon such action." Mr. Burch had passed that "point beyond which forbearance ceases to be a virtue."

The assurance of Mr. Burch, that "we are paying fast as we can" may be gratifying to some, but there are many, probably, who look upon orders on the "management" of *Gleanings*, by Mr. Burch, for the repayment of money sent him for bees and supplies, in about the same light that Dr. E. E. Worthen does.

The South Haven, Mich., *Sentinel*, of Aug. 27, gives the promised particulars of the case where Mr. Burch has had money for goods over two years, and yet the order is *unfilled*, and adds:

With such charges staring him in the face, we should like to know how much cheek it required for Master Burch to write to the *BEE JOURNAL*. "If you feel like saying in the *BEE JOURNAL* that you regret our being so much behind, but are assured that we will make all satisfactory as far as lies in our power, we shall feel grateful."

Another Dishonest Dealer.—In the September number of *Gleanings*, we find the following allusions to another of those swindlers who would bring disgrace upon any respectable calling they might adopt:

Lebanon, Mo., Aug. 15, 1881.

I drew on G. W. Marshall for the pay for his advertisement, and he repudiated it, and we drop his card; and if any one has lost money by reason of his ad. in our *Journal*, we are ready to make it good. E. M. HARRISON.

[That is business, friend Harrison, and here is our hand on it. Let us suffer long, and be kind, but when a man repudiates his honest debts, he should be held up as a warning.]

And yet, under the editorial head of the same paper whose publisher condemns this G. W. Marshall, we find him accredited, as late as the August number, with being its regular subscription agent, and he has been so announced during the whole season. We learned years ago, through business transactions with him, that this man Marshall was dishonest, but we do not propose to admit a *particeps criminis* by assuming any of his obligations, or refunding moneys he has swindled patrons out of.



MISCELLANEOUS.

Large Crop of Honey in Canada.—The Woodstock, Ontario, Canada, *Sentinel*, gives the following account of Mr. J. B. Hall's apiary and crop of honey for this year:

In a very recent conversation with a gentleman who had been long and intimately connected with bee-keeping he declared that every township in Canada was annually losing \$10,000 by failing to keep as many bees as would gather all its honey. Such a waste of our productive wealth is really startling, and it is satisfactory to know that it does not occur in or around Woodstock. A visit to the apiary of Mr. J. B. Hall on Drew st., will convince anyone that Woodstock's honey is all collected. Mr. Hall has now no less than 250 thriving colonies of bees, and has this year obtained over 6,000 pounds of honey. He reports the year as a fairly good one, and seems highly pleased with the signal success that has attended him as a bee-keeper. A visit to his apiary on Wednesday proved both pleasant and instructive, and we recommend all who are interested in bee-keeping to go there too.

By the same paper we notice that Mr. Hall has taken unto himself a bride—Miss Mary Adams—and the *BEE JOURNAL* wishes that their honeymoon may be their *light and sweetness* all through life, and always be provided with a sufficient store of *bee-bread* for their numerous brood. Mr. Hall is to be congratulated upon the successful re-queening of his *chief hive*, after it had been queenless for two years.—It would have been an impossibility with bees.

Biographical.—The following is an extract of the biography of the late editor of the *Bienen Zeitung*, found in that paper of June 15th, for a translation of which Messrs. Greiner Bros. have our thanks:

Herr Andreas Schmid, editor of the *Bienen Zeitung*, died in Eichstedt, May 2, after a long, suffering illness, in his 65th year.

Not far from Regensburg, in the small village of Grunthar, Andreas Schmid was born, on Feb. 25, 1816. His parents, Andreas and Ursula, were in very moderate pecuniary circumstances, and the support of the family, consisting of 2 more brothers and 1 sister, caused them frequent denials of many necessities of life. The fact, that a piece of wheat bread or an apple was considered a rare "holiday" treat, sufficiently illustrates their circumstances.

When 6 years of age, he was sent to Irlbach to school; his chance for educational advantages was here anything but encouraging, for the teacher himself could neither read nor write. He soon distinguished himself above his schoolmates, which attracted the attention of the village parson. He was frequently invited to the parsonage, where he found occasion to add little by little to his education. He also made himself useful about the house and garden, wherever an opportunity was offered, but especially when this parson, who was a lover and keeper of bees, was engaged in handling the bees. Having a natural liking for these little insects, and being encouraged by the parson, he probably formed here the love for the calling he so faithfully pursued in after years. From his 13th year he went to high school, at Regensburg; his untiring perseverance in his studies, soon distinguished him here also,

and the Government sent him, in 1836, for his final education to the capital, Munchen, and 1 year thereafter to the Teachers' Academy, in Eichstedt, as assistant principal. His labors in this position so occupied his time, that he was engaged from 5 o'clock in the morning until 10 at night, daily, leaving him only the hours of the night, Sundays and holidays to attend to his private affairs. The Government sent him again in 1853 to Munchen, to study chemistry, and in 1867 back to Eichstedt, as principal. The agricultural department of this institution, included apiculture in its studies, and Andreas Schmid found it necessary to fit himself theoretically and practically for its teachings. He purchased at once bees, which he placed in the garden of the Academy, and the students received, under his management, daily instructions in practical bee-keeping. Many of these students, possessing a natural taste for bee-keeping, aided in the advancement of the cause; in later years, when scattered as teachers over the country, they became distinguished bee-keepers, encouraged others in the pursuit, founded Bee-Keepers' Associations, etc. His example found many followers. His labors and zeal in advancing the cause are duly appreciated by all the German and Austrian bee-keeping fraternity, and he always lived as an unselfish, noble and conscientious friend and adviser in the memory of all that knew him.

Handling Bees without Smoke.—A correspondent in *Gleanings* remarks as follows about handling bees without smoke:

"When we throw away fear entirely, I think smoke is of little or no use. I believe we can handle bees the year round, and do it with more satisfaction and better results by leaving smoke entirely out of the apiary. If instead of going to a hive, jerking the cap off, tearing off the quilt, and blowing in smoke to arouse the colony to a fighting pitch, we would be cautious, raising the cap easily (a cap that will not come off without jarring the hive has no business in the apiary) raise the quilt slowly, without jarring, avoid all quick motions laying the quilt to one side, and then pick up the frame, or, rather, commence picking it up, draw it out slowly. You will then have no trouble, even with black bees, running over their combs, scared to death. If they fly in your face and alight on your hands not one in twenty will sting you if you just pay no attention to them. I have discarded smoke almost entirely."

Why do you not discard the smoker entirely, if its use is unnecessary; why say "almost entirely?" With strong colonies of bees, during a brisk honey flow, the practical bee-keeper would make but little headway in manipulating his hives without smoke, unless provided with a skin as impenetrable as that of a rhinoceros and perfectly reckless regarding the number of bees killed.

Both Sides of the Question.—Mr. T. C. Hagaman, of Benton Harbor, Mich., the great fruit region of the west, on the subject of bees injuring grapes, remarks as follows, in the *Benton Harbor Palladium*:

As I have an interest on both sides of the question, I ought not to be prejudiced either way. Bees, no doubt draw the juice from raspberries and probably find the way through the skin of them without any assistance, as the juice will run from them as soon as picked, if fully ripe. I don't know that they injure the raspberry trade, unless it is by a little sharp practice upon the berry pickers occasionally. I have been watching them for some years to learn if they did injure fruit, and I could only find that after a small

gray bird had put its bill through the grape the bee would then follow, as they say of the grave-stone peddler, after the doctor. I have frequently seen the birds on the grapes and driven them away, and found that where I saw the birds most frequently they were punctured upon the upper side of the cluster—2 or 3 holes, sometimes, in one grape, over $\frac{1}{2}$ of an inch across, with the skin of the grape lapping down inside, showing very plainly that the bee could not make such an incision with its small proboscis. The grapes in the lower portion of the cluster were almost invariably sound. The bees will not wait for an invitation to work upon fruit that has a broken skin. That is a part of its economy in providing for its future wants. Can any one blame it for this? I do not, and while I love good fruit I also love good honey and enjoy taking care of the bees, although they do play sharp on me sometimes. From my observations I have no reason to believe that the honey bee does in any way injure fruit, and I believe that this charge laid at the door of the honey bee is entirely without foundation.

Bees in Southern California.—We condense the following from an article which recently appeared in the *San Francisco Examiner*. Evidently the estimate of the honey crop this year is too large, as it will fall far below an average:

The extent to which honey-making is carried on in the foothills of these extreme southern countries is something remarkable. Careful estimates, by responsible, well informed apiarists, place the number of hives being worked this season in the three counties of Los Angeles, San Diego and San Bernardino at nearly 200,000. There are at least 600 men wholly engaged in saving honey this season, and an average crop is assured. Last year the honey crop of San Diego county amounted to 1,291,800 pounds, and this year it will be larger. The total crop of Ventura, Los Angeles, San Diego and San Bernardino will not fall short if it does not exceed 3,000,000 lbs. this season—at least that is the opinion of well informed apiarists. The growth of this business has been very rapid, and may now be said to be in the zenith of prosperity; for, as the sage, sumac and other honey-producing flowers and shrubs decrease, so also will the number of bee colonies, now so numerous along the southern coast range.... In 1877 there were only 22 bee ranches in this southern region; now there are not less than 500. Five years ago the crop of honey was little in excess of home consumption; now several large ships can be loaded with the crop of a favorable year.

The bee-keeper usually lives upon government land, not because he is unable to purchase what land he requires (which is a small amount) but because the wild sage, button sage, sumac and other honey flowers and shrubs are found growing luxuriantly where land considered worthless for grazing or cultivation is left unclaimed and undisturbed. In almost every accessible gulch, gully and valley where water can be had—and where the white sage blossoms, a bee ranch may be discovered. They are solitary places, veritable hermitages, where intruders from the outside world never find their way. Many of them are very beautiful little rural gems, set within a bower of roses and honeysuckles; some are merely a shed among rocks and brush, devoid of taste or comfort. These bee-raisers cultivate a sort of freemasonry among themselves, and aid and advise each other when called upon. They soon become accustomed to their solitude, and gradually accumulate a competence. There are a few exceptional cases where men have failed in bee-keeping down here, but they are few and not often found. No one should attempt to keep a bee ranch but a lover of solitude. It requires close care and attention, much patience, and little capital.

CORRESPONDENCE

For the American Bee Journal.

Honey Producing Plants.

G. W. DEMAREE.

The value of the locust tree, commonly called black locust, as a honey producer, I think is not as generally known and appreciated, as the true merits of the tree deserves. The fact that Prof. Cook, in his Manual of the Apiary, merely gives this tree a passing notice, indicates that it either fails to give the best results in many parts of our vast country, or the tree is not as well known as it should be. The time of year in which it blooms nearly filling the interval between the late fruit bloom, and the white clover, makes it an exceedingly valuable auxiliary to the honey harvest in the middle states, if not elsewhere. It is a most profuse honey bearer, rivaling the famous linden in quality, and only inferior to the product of the latter in color. Locust honey cannot be said to be dark in color. It is of a rich paled color, when in a liquid state; but when in the shape of comb honey, its appearance, if removed from the hive when first finished, is but little inferior to our superior clover honey. It becomes exceeding thick, if left with the bees till the cells are thoroughly sealed, and its keeping qualities are therefore most excellent. We have used it on our table when first extracted, and after it was a year or two old. Many persons have partaken of it, all of whom have pronounced it extra good. The farmers in this part of the state are planting thousands of these trees, for the valuable timber they furnish for fence posts, telegraph poles, and for all purposes where durable timber is needed. The locust is a rapid grower, and is quite free from disease. I have seen it bloom the second year after transplanting. The trees are planted by the side of fences, in waste places, and on poor worn out lands. They may be propagated from the seeds, or by transplanting the young trees from 1 to 3 years old. If the ground is plowed in the spring, and the locust seeds planted on the hills with corn, or with other hill-crops, and cultivated the first year, the young trees will grow with great rapidity, even on very poor lands. In this way beautiful groves can be started, making the land, in process of time, very valuable, in locations where timber is an object, besides giving a perfect sea of bloom, laden with precious nectar.

Every bee-man knows that a mere patch of bee-forage amounts to but little. If we are to have great results in the way of yield of honey, we must have a sea of bloom to obtain it from. Now that this new source of bee-pasturage is being so rapidly developed, all unconscious to the farmers who are planting and training these trees by the thousands for their valuable timber, some change must necessarily take place in the management of bees in the early spring. Our colonies must be made strong enough to harvest the tons of nectar secreted by the locust bloom in the short space of about 10 days. I had a few colonies last spring strong enough to teach me what may be gained from this source.

Commencing with empty hives, the queens were crowded out in 4 or 5 days, after the locust bloom opened. With strong colonies and plenty of empty combs, the amount of honey obtained would depend much on the good management of the apiarist. It is no easy matter to get bees strong enough by the 10th or 15th of May to give the best results. Some of the best colonies can be depended upon, but to get an entire apiary ready for strong quick work, is another matter. I know of but one way in which it can be accomplished, and that is to unite

2 or more colonies together. This I shall do hereafter without hesitation. Our honey seasons (even the best of them), are crowded into about 2 brief months of time, and if our bees must be built up during these precious days, the season is simply lost to the apiarist. What matters it, though we increase our colonies of bees, if they are never ready to reap the harvest.

Uniting bees in this climate gives them the swarming fever, most awfully bad; but even this is preferable to doing nothing.
Christiansburg, Ky.

For the American Bee Journal.

Pollen Detrimental to Wintering.

JAMES HEDDON.

"In our common ignorance, all have an equal right to guess."

Some time ago I threw out the bacteria hypothesis, to be thought of and weighed in the scales of others' experience. But little has been said about it, and those who have written upon the subject have spent most of their force in trying to pin it to me, rather than to disprove the correctness of the theory.

You will see, by the records, that I never failed to assert that I "had not seen the animal." "did not know it existed," thought it might be "vegetable matter in the food" (I guessed in the honey), and now, after carefully examining a large number of dead colonies of my own and among my neighbors, I have settled down upon the belief, strong and positive, that the trouble is "vegetable matter in the food," not, however, in the honey, but in the cell-joining—that dysentery is caused by the consumption of bee-bread. I stand 10 to 1 on this question. I understand that when any animal is forced to consume of food several times its bulk and weight, and that, too, without any voiding of excreta, which is its natural habit during another season, that food must be of a highly refined and oxygenized nature, or disease will be the natural result.

I do not believe that bee-bread can be eaten during the period of confinement, and good health to the bees be the result. That they do try to use it in place of their natural food (honey) and that their failures are well known and fully realized by us, I am sure.

If but few agree with me, it is comforting to feel satisfied as to the cause, and that step having been taken up the hill of science, we can now prepare to search out the cheapest and most effectual method of prevention. I see that others have come to the same conclusion, and I have faith that the preventive is near at hand. The unaccountable phenomenon of Smith's bees all dying, while Jones', treated the same, and only three miles distant, all or nearly all live, shows the fallacy of looking for a cause in "cold," "confinement," "dampness," or any of the popular theories. None of the supposed causes will agree in the effects as we are forced to find them. I think the consumption-of-bread theory will.

There are more than a dozen different causes for the consumption of bread, which vary in the extreme in different winters, and in different localities only a short distance apart.

I will mention a few: First, I believe that the consumption or preference for honey, and not bread, during all that period when bees must void no excrement, except by sensible and insensible perspiration, is a fixed fact. The cause of dysentery is a variation from that rule, and the winter consumption of bread by the older bees; the attractive quality of the bread vs. the attractive quality of the honey; the closer proximity of bread, or more easy of access than honey (continued cold spells affect this largely); disposition to breed, in which case the bees being forced to handle the bread to feed the larvæ, eat of it more or less themselves. I have not found a dead colony, where there was not either plenty of bee-bread showing signs of

late work with it, or brood in all stages, and generally both; but nearly always brood. I have found a few colonies that died late of starvation. With those that had accessible pollen, and tried that as a last resort, dysentery is to be seen in greater or less degree; but with many that had little or almost no pollen in the combs, all the bees and combs are as bright as any live colony. The sources, and consequent time of excessive fall pollen gathering in different localities only 2 or 3 miles apart, varies greatly, many times even more so than the gathering of honey.

Allowing this to be the cause, it is not the easiest matter in the world to foretell by examination, late in the season, whether colonies are going to die generally or not, because the pollen in the combs will not decide the future result; much depending upon its position in the combs at the dangerous time, and its attractiveness as compared with the honey as they may exist then, also much upon the frequency with which the bees can have a thorough voiding flight, and the excess of the cold, which governs to a large extent the amount of food consumed.

In a large majority of the cases where sugar syrup has been used, the reports have been favorable. I can only account for it on the supposition that the quantity and quality of the food was such that it was much preferred to the pollen, and exclusively used, and during the process of feeding much of the pollen that would have otherwise been left, was consumed or removed. In those cases where bees fed exclusively on sugar syrup have died with the disease, the pollen was eaten, sugar or no sugar.

The best method of prevention is what interests me most. I have given the subject but little thought as yet, owing to the summer's rush of work, and I do not think of any method sufficiently speedy, safe, cheap and sure to warrant its adoption in preference to taking the chances of success without cost or trouble.

It occurs to me that Mr. Grimm's plan of inserting two full frames of sealed honey (previously stored away for the purpose) in the center of the brood chamber is good, I would add the following precautions: have these two combs free, or nearly so, of pollen. Remove three combs containing the most pollen, leaving the space in the center of the hive, in which space insert the two honey frames. The extra space, as recommended by many, I think I would like very well, though I would not create it were I not going through a more important manipulation, in which case I could do so as well as not.

Another, and perhaps better plan, would be to remove the three frames containing pollen as before, and insert the same number of empty, straight, all-worker combs in their place, and feed them full of properly made sugar syrup. This should be done immediately after all gathering is over, and not later, and the feed should be given from the top, and directly over these three center combs, from a capacious feeder, or several feeders if smaller, to the end that the feed may be taken down and sealed up as soon as possible, and care should be taken against inciting the bees to robbing, which can be avoided. If part of the stores are not sealed no harm will result from it. Place two bent sticks over the tops and under the cloth or cushion thus, —, to give the bees free access among the combs during the latter part of winter. This plan might pay even in large apiaries, especially if the colonies needed more stores than they had on hand.

I think even feeding light colonies with white sugar syrup is largely a preventive of dysentery. While honey of any color or flavor might be as good a food when eaten, still I suspect that sugar syrup has an extra attraction for the bees, that induces them to use it to the exclusion of pollen.

Some simpler, cheaper and less complicated method of causing the bees to abstain from eating pollen during all

that period when they are obliged to semi-hibernate, is what I most desire.

I still believe that there is a difference in races and strains of bees in regard to their wintering—bees that breed earlier are in most danger. My colonies that were not packed wintered best, but were summered in another field. More than nine-tenths of the bees about here perished, while I saved over one-third of mine. Those in box hives died worse from some cause—probably chance.

Dowagiac, Mich.

For the American Bee Journal.

My Early Experience with Bees.

MRS. M. L. PARSONS.

We began the season of 1879 with 2 colonies of Italian bees, one of which was quite inferior. Our expenses, including cost of bees were \$24.25. Re-compense for our labor was 119 lbs., box honey, 60 lbs. in frames, and increased stock to 6 colonies; left them for winter 7 frames of good capped honey; put chaff cushion on inner side frames; filled covers with chaff, and packed a foot or more of straw around and over them. They took but one general flight, Jan. 4. We opened them April 1; they were bringing some pollen; inferior queen had but a handful of bees. One young queen, superseded by a laying worker, gave me much trouble; remaining 4 had brood in all stages, some capped; 1 colony killed the queen in April, so we had, May 1, 3 good colonies, and 2 queenless ones.

We then bought of the Misses Wilkins, 16 colonies of as beautiful Italians as one could wish. With 2 sample hives, frames, etc., they cost us, delivered at our station, $\frac{3}{4}$ of a mile from home, \$149.74 cts. Our hives, frames, sections, section frames, shipping crates, separators, 4-frame Everett extractor, etc., brought our total expenses to \$341.70, all but sections being a permanent investment. From the 19 colonies with which we began in 1880, we have 847 $\frac{1}{4}$ lbs. comb, 530 lbs. extracted honey, 11 $\frac{1}{4}$ lbs. wax, and have increased to 47 colonies, each of which made from 30 to 35 lbs. of good capped honey. When packed, Nov. 8, some queens too, had a little brood and some eggs. We bridged over entrances, packed 8 inches of hay in front, 12 or more at the back, and filled entire space between the hives (about 3 feet), with hay; have a duck sheet, woolen blanket and cotton quilt over frames. A good tight roof protects them all. Every queen has a name and number, my book giving credit to each the work of her own colony. Our dark bees gave best returns, "Nettie Carr" with 104 10-16 lbs. comb honey, besides some extracted. We get 16 cts. for comb, and 12 $\frac{1}{4}$ for extracted honey, at Bay City. There was considerable buckwheat within reach of our bees, but either it secreted no honey, or the bees liked other plants better, for we have no dark honey, some of the last taken being as white as linden. We took every section from the hive as soon as finished; at close of the season extracted from unfinished sections. Use 5 $\frac{1}{4}$ x 6 $\frac{1}{4}$ sections; adopted Miss Wilkins style of hive, the 10-frame American, with Doolittle hive for surplus honey, enlarged to take American frame.

We have used the Van Deusen foundation, both in frames and sections, successfully. Used at the last sheets that nearly filled sections, and like those best. Shall try the Dunham foundation this season coming.

We lost some young queens, by their either not returning at all, or to wrong hive. I rescued 2 that were balled, and put them in the right hive; had 5 queens fly from frames while in my hand, 2 of which were laying, returned, but the 3 "foolish virgins" I never saw again. We united several colonies without loss, by use of atomizer, using oil of spruce cut with alcohol, and reduced with water, and sprayed all the bees and the hive well, and they gave us no trouble; placed a

board in front of the entrance, but none returned to the old stand.

We give our bees the closest attention, having discovered they do not work for nothing and board themselves, Mr. Parsons and myself often being with them from 4:30 a. m. till dark. We are working to succeed. I see nothing but praise for "sweet clover," but from our experience with it east, I should as soon think of sowing Canada thistles; I think those who advocate its introduction can't be farmers.

Perry Station, Mich.

[We have heard but little complaint from practical farmers regarding melilot or sweet clover. It certainly is no worse to eradicate from the ground than ordinary weeds, and should not be compared at all with thistles, nor even with Spanish-needle, while its superiority as a honey plant should make it a great favorite with all keeping bees, if but a single colony.—Ed.]

For the American Bee Journal.

The Origin of Drones.

A. R. KOHNKE.

Mr. Robinson's hope, that some professor will deign to write an essay on this subject, will probably be in vain. Such a waste of paper and ink could hardly be asked of a person conversant with the subject, as all intelligent bee-keepers are. He may as well try to refute Euclid, and then ask some professor to write an essay to prove this illustrious mathematician correct. This article is not intended to gratify Mr. Robinson's hopes. To arrive at certain truths and facts through a course of reasoning, is, perhaps, beyond his ability; or he might understand them, if given by others, which he seems not to do. But I would like to ask him a few questions, namely:

1. Has Mr. R. a microscope of 1000 to 2000 diameter power? 2. Has he ever seen the sperma of any animal through such an instrument, especially that of a drone? 3. Has he ever dissected a worker or drone egg immediately after being laid? If he has not, he should do so, in order to obtain ocular proof of what has been known as a fact since 1855, instead of questioning the authority of men who have made entomology a life study. Referring to von Siebold Leuckart, and Donhoff, he says: "Those men fancied," when the "fancy" is exclusively his own. For it was von Siebold who, in 1855, proved by ocular demonstration, in von Berlepsch's own apiary, the theory advanced by Dzierzon. His assertion that von Berlepsch was in the dark is therefore without foundation.

Youngstown, O., Aug. 26, 1881.

For the American Bee Journal.

Are the New Races Superior?

A. F. MOON.

Candidly speaking, never since the publication of the AMERICAN BEE JOURNAL, has it stood so intrinsically high as it does at the present time, and it owes the position it now occupies in the nation to the untiring energy and unselfishness of its editor, and the intelligence of its numerous correspondents. What a change has come over its face!

I was forcibly struck in reading the editor's answer to Mr. Johnson, on page 252 of the BEE JOURNAL for Aug. 10, regarding the best bees. In your free, outspoken answer, you have now placed the matter where the advocates of this class of bees will certainly be obliged to step to the front with the proof of their superior qualities, should they possess any; if they do not, the sooner they abandon them the better it will be for all parties concerned.

It appears from the accounts given of the Cyprian bee, even by some of

its breeders, that it is a difficult matter to distinguish the Cyprian from the Italian. This being a fact, and the probability of the two races becoming mixed, any one can perceive the great injury that will be done to those breeding the Italians. I long ago had my fears aroused, and more especially after reading Mr. H. Alley's description of them in the BEE JOURNAL, and concluded the less such stock beekeepers had to contend with the better, if we expected to make any improvement in the Italians. Further, I cannot see how any queen-breeder, rearing all or any of these bees in the same apiary, or within two miles of each other, can keep any one strain pure. If fertilization could be controlled, then we could do better. From the description of these bees, not one bee-keeper in five hundred can tell whether they are pure or not; and to talk of purity, or keeping them pure, is all nonsense. We want to hear from some of their advocates. I see that quite a number are advertising them, and hope they will not all speak at once. Let some one who knows of their good qualities tell us what they are, and if the Italian bee proves the best, abandon those which are inferior, and not fill the country with stock that will mix the races, thereby lessening, instead of enhancing, the value of the better stock. Remember, we have had great trouble in keeping the Italian bee in its purity, and now we have a double dose to contend with. I certainly would be glad if a better bee could be had, and that I long ago predicted would be obtained by the improvement of the Italian. But new things and wild speculation often sweep over our people at a fearful rate. Some 35 years ago the *Morus multicaulis* fever raged to a fearful extent, and all wanted the mulberry and silkworms. So with our bee-keepers; they caught the fever for the Holy Land, Hungarian and Cyprian bees, not being content with our excellent Italians.

It now turns out that the most practical bee-keepers of this country condemn them, although they have advertised them for sale; but no doubt, like some others, they learned their qualities. If such bee-men as Chas. Dadant are not competent to judge of their qualities, etc., it is useless to look further. Although some good breeders like them, I would like the *modus operandi* for breeding so many races and keeping them pure. If they cannot keep them pure, who would want them?

Fall rains have set in, and bees are doing well.

Rome, Ga., July 16, 1881.

For the American Bee Journal.

Methods of obtaining Surplus Honey.

J. O. SHEARMAN.

The main thing is to obtain a good location, for, if the bees gather but little, the bee-keeper will have less.

The above heading relates more particularly to management with the means we may have at hand. I shall, therefore, give some personal experience, as it seems to me that we gain more information by comparing ways and means than by theory merely.

I like a hive with the back for a division board, so that the brood chamber can be made smaller or larger in proportion to the amount of bees. I have obtained some of my best results by reducing the hive to so few frames in the spring, that the bees will nearly cover them, and keep them in that proportion till surplus begins to come, then put on boxes in like proportion as long as they are satisfied, and all keep to work. As soon as they are crowded, or show indications of swarming, move part of the hive backward; put empty combs or foundation in the middle, add as many boxes as the bees can be crowded into, etc., until the hive is full; then if more room is needed, I take out combs of brood for new colonies, and continue as before.

In a poor season any average colony of bees can be controlled in this way, and I have run some strong colonies through a good honey season with good results, and no swarming, by tying up surplus too; but it takes too much time to run a large number in that way, in a good season, and we are sometimes pushed to throwing back swarms, or else increase, which is undesirable when we have enough.

In regard to the style of surplus, extracting is generally allowed to give the greatest quantity, but it was rather a failure with me during the past season, for this reason:

Honey came in about fast enough to induce brood rearing, and both stories were near filled with brood while the flow lasted; when it had passed, there were many more young to feed instead of to gather surplus; for our surplus came in short runs, sometimes very short.

Glassed boxes seem to be the most convenient to handle, as they can be more readily be seen when full and taken off independently, and it is the most work done over the centre of colony. It is a slow and mussy job to exchange places with sections before capping, as we often do with boxes. It is quite an object to be able to put on as much room for surplus as possible at times, as bees often gather more than they can cap, in wet weather or a heavy flow. But if tiered up, the top is seldom as well finished or as full as the under tier. Sections, if put in the body of the hive in the brood frames, are apt to have pollen stored in them. They also cost more to crate, and in breakage, in handling or shipping. There are also more cells than in boxes, though honey in sections sells quicker and at a better figure, and it is, therefore, a more desirable shape, when a person has the time to spend on them.

New Richmond, Mich.

Exch.

Bee Culture for the South.

O. F. BLEDSOE.

We hold that a people to be prosperous, must diversify their pursuits, and develop in every direction all the resources of their country. Nothing that tends to the sustenance and comfort of human life but that deserves attention. Northern people (to their credit be it spoken) pursue with the keenest intelligence and ardor, all branches of industry, great and small.

Nothing that their country will develop is neglected. They even force churlish nature to be partial to them. They have taken the minor pursuit of bee-culture, and brought it to a systematic and remunerative branch of industry, though they are compelled to house their bees during the winter, even then losing vast numbers each winter, and in summer have only limited seasons of bloom.

The natural advantages in this pursuit are in many respects with the south. Here no extra care is required in winter, and our bloom is more continuous, though we are not prepared to say that we ever have as great a flow of honey as is sometimes given by the basswood and white clover of the north.

Still our honey resources are undeveloped, and we might, in some sections of the south, excel anything yet achieved by the north.

We know not what we can do until we apply intelligence to the pursuit, and adopt the modern system of bee-culture, which consists, first, in an exact knowledge of the honey bee and its habits, to be obtained from works like Langstroth's and other newer ones, and the current bee periodicals.

Second, in the use of the movable frame hive, so that the entire contents of a hive can easily be taken out at any time.

Third, in the use of the extractor and other appliances and inventions. Fourth, in the use of Italian bees, which are more prolific, industrious and hardier than the common black

bee. They are very beautiful, having yellow bands across the body. They are very gentle, and with the aid of a bee smoker and a veil, one need never be stung in their management. They are moth proof. The bee moth or worm never disturbs a strong colony of Italian bees. I have placed a comb full of worms in the midst of a strong colony of Italians, and in a few minutes the worms were writhing on the ground. I have taken 100 lbs. of honey from a single hive of Italians in a season, and consider that amount as not extraordinary. As much as 500 lbs. have been taken from a single hive in a season in the state of New York.

We hold that bee culture is a highly intellectual pursuit that would be a pleasant and profitable recreation to thousands of farmers, if they would go at it right, and that if it were carried on in Mississippi, as in the north, it would go far, directly or by exchange, toward supplying our people with all the liquid sweets they consume—a result decidedly in the direction of "the glorious privilege of being independent."

Grenada, Miss.

For the American Bee Journal.

Fertilization in Confinement.

C. J. ROBINSON.

We occasionally read of fertilizing in confinement (that is copulating with drones while inclosed in a coop). On page 66, vol. I. of the BEE JOURNAL, the Rev. L. L. Langstroth furnishes an account of an ocular demonstration by Messrs. Cary and Otis, of the queen and drone bee, which I could not indorse as correct at that time nor since, the position of the two. The drone clasping the queen around the body, etc.

The architect of nature has so arranged the gentle parts of the drone and queen, that it is physically impossible to make their genital parts meet with the drone on the back of the queen. They must be reversed, and the queen clasping the drone with her legs, and driving the drone down in close contact with her body with a quick motion, the genitalia are thrown out into the vulva of the queen, by which means the copulation is accomplished, which it is known that the queen could not do if disabled in her legs or wings.

Take a live drone, and by a gentle pressure between the thumb and finger, it will cause them to throw out their genitalia, which curves over towards the back or head, with a joint about $\frac{1}{2}$ of the length from the end, which end curves downwards with double barbs at the underside at the joint, and is composed of a very thin membrane filled with compressed air, and the semen also thrown up (that is contained in the 2 horn-shaped sacs situated at the base of the genitalia), with sufficient force to burst the end, and the semen is thrown out leaving the inside casing of the sack which is held by a thread-like tendon, attached at the base, the same as animals after giving birth to their young. On my theory of reproduction of queens, the workers that attend the drones on their excursions cause them to give off semen, which they convey to their hives to perfect queens, which also accounts for the cause and use of so many drones, as they expire immediately on giving off their semen. See what nature has done to accomplish that design—in so constructing the drone that a slight pressure of the abdomen, by the legs of the worker or queen, or the fingers, to throw out the genitalia, if the worker is clasping the body to obtain royal jelly, or the queen to get semen into her spermatheca. In this, the drone is like some plants: when ripe, with a slight pressure the seed vessels explode and throw off the seed.

It seems evident that the Creator had some further use for the drone than barely to copulate with the queen. I have watched the drones

and workers as they issue forth from the hive, and take their flight together, the drones appear as if fired with the love of reproduction of their race. The foregoing theory shows the use and wisdom of God in causing so many drones at times, and the mystery is made plain in the perfecting of queens in the absence of drones, by the impregnated worker-larvæ with semen. The queen must fly out before becoming fully fertile and a perfect queen, and have a connection with a drone and her spermatheca, filled with semen, which is done, as indicated in the foregoing. I have caught a number of drones and held them in my hand until warm; then a gentle pressure between the thumb and fingers will cause them to throw out their penis and the thin membrane bursts at the extremity, and the semen is thrown out. I then placed them on a board, and then procured working bees, the same as in hunting wild bees, and they licked up every particle of semen, thus extracted, and conveyed it to their hives.

My theory as indicated in a former article, is the only one yet offered that satisfactorily explains the phenomena of inhabitants of the hive coming forth in changeable and changed sexual forms, and what is now admitted to be the history of the bee, in accordance with the instructive laws given them by the Creator. And by looking at the subject from my stand-point of observation, the reproduction, as set forth in said former article, of the 3 kinds of bees, becomes plain and rational.

Richford, N. Y.

For the American Bee Journal.

The Three-Band test for Italian Bees.

G. M. DOOLITTLE.

On page 219 of the BEE JOURNAL are these words:

"Are we to accept as true the absurd and illogical doctrine, propagated by some vendors of queens and bees, that a queen whose progeny must be filled with light-colored honey, and placed upon a window in order to exhibit the faint outlines of 3 precious bands, is just as pure as a queen whose progeny shows the orange-colored three bands under all circumstances?"

In answer to the above question, or a similar one, A. I. Root says that such is the test that must be applied to the progeny of some queens, imported direct from Italy, in order to see the 3 yellow bands. If such is the case, then we must conclude that the window test is sufficient, or else that no certain purity exists in the long continued home of the Italian bee. Then we must also conclude that the purity of the Italian bee consists in what is called "thoroughbred," rather than their being a distinct race or variety of bees, if we do not accept the window test.

Once more; if the window is not as acceptable as the 3 orange-band test, and that the bees showing the latter are the preferable ones, where the need of farther importation from impure Italy.

I wish to say a few words about those orange-colored three bands which show under all circumstances. I have had queens from nearly all breeders in the United States, and queens which produced workers, a part of which showed the fourth band as plain as most Italians show the third; still I have yet to see the queen whose progeny not only showed the three and four yellow bands, but also the shield, said to be a characteristic mark of the Cyprian at a certain age, yet at other stages of their existence they would not show the three yellow bands under all circumstances.

It will be seen, I claim the age of the bee has more to do with this three yellow band business. If we look at the young bees as they crawl on the combs from the time of hatching up to 5 or 6 hours old, we shall find that unless the abdomen is curved, there will but few

of them show the three yellow bands, nearly all looking like two banded bees; but if we look at them again when from 5 to 10 days old, they will look like different bees, their abdomen having filled out at that age. I claim every bee should show the three yellow bands while standing on the combs, to be such bees as I should want to breed from. Now pass to November, and again we have the same thing which we saw in our very young bees over again, at which time the bees of our best colonies in their undisturbed repose, show scarcely more than the two bands.

As far as my experience goes, I have yet to see the queen whose progeny show the three yellow bands under all circumstances. I quite agree with Mr. Demaree, that condition has a great deal to do with the working capacity of a colony, be they dark or light; still I also believe there is a difference in bees, and that only by a careful selection of the best each year, can the "coming bee" be obtained.

Borodino, N. Y.

CONVENTION

Preparing Bees for Winter.

The following discussion on this subject, had at the North Eastern Convention last February, will be of interest, now that it is time to be preparing for another winter. It followed the reading of Mr. Chas. Dant's essay, as published in the BEE JOURNAL for Aug. 3, 1881, page 242:

Mr. Bacon said it was sometimes impossible to put bees in winter quarters just after a flight. This season cold weather came on suddenly and remained. He advocated winter flights, although bees could be successfully wintered without. I find that bees get moldy in cellars, but they winter well in the bee house.

W. A. House concurred in these remarks: He had wintered in 5 different cellars. Lately he had experimented in out-door wintering. In the winter of 1879-80 he had 104 colonies, and kept 13 in the cellar, the rest being left out-doors. His percentage of losses was largest among the bees kept in the cellar.

Mr. Doolittle thought Mr. Dant was mistaken in saying that bees would die in 48 hours at a temperature under 40°. Bees would be dormant, but on being brought into warmth would revive. The effect of cold depended on the condition of the stomach of the bee, whether full or not. Mr. Dant met his views on the subject of water being necessary for the young brood. Mr. Dant says bees will die if kept longer than 5 or 6 weeks without a flight. His bees had already been in ten weeks without a flight. He had once kept bees five months without flight. He did not think it necessary to put each hive on the same stand it occupied the year previously. He set out his bees promiscuously and lost no bees. The bees marked the place from which they took their flight.

Mr. Bacon said he had given up marking the place where the hives stood. He believed in putting out only a few bees at a time. Putting them all out at once confused the bees.

Mr. Rians said he had been very successful in wintering bees for five years. He wintered on the summer stands, putting a quilt over them and packing around with straw. This winter he put a coffee sack filled with chaff in the tops of the hives to absorb the moisture.

Mr. Scoville said if Mr. Bacon set his bees out at night, he would have no trouble in getting bees mixed.

Mr. Read said he had poor success in wintering bees. One winter he

covered the hives with snow, and wintered all but 1 colony out of 11.

Mr. Bacon believed wintering under snow was very good, provided there was no rain.

Mr. House said the moisture of the unfrozen ground, had a bad effect on bees kept under snow.

Mr. Snow said he used a double-walled hive. He placed his bottom board on dry pine shavings to keep the wind from blowing under the hive. This is just as important as a warm floor in a house.

Mr. Read said he had found that bees wintered in the cellar, dwindled more in the spring than those kept out-doors. Mr. House coincided with this.

Mr. Snow said he had built a stone bee house, kept his bees in it one winter, and in the spring found that it took longer to stock them up than those left out-doors. Since then he had adopted the plan of wintering on summer stands with much better results. Had practiced this altogether for ten years with good results.

Dr. Marks gave his experience in wintering bees under snow. He instanced a case where there was heavy crust on the snow, where his bees kept best of all. Bees kept in-doors dwindled twice as much in the spring as those wintered out-doors.

Mr. Doolittle said winters varied, therefore he thought it good policy to winter in the cellar, and out-of-doors in equal proportion. A winter favorable for wintering out-doors, was not favorable to wintering in the cellar, and vice versa.

Mr. Bacon favored a higher temperature than 40° part of the time during the winter.

Mr. House said his experience was precisely like that of Mr. Doolittle in regard to wintering under the snow.

Mr. Doolittle said he had kept bees in a cave, distant from the outer air no less than 3 feet at any point. The temperature of the interior did not vary more than 1 degree the entire winter. The bees wintered very well.

Mr. Nellis thought bees wintered nowhere better than under the snow. Bees under the snow are very dormant and consume but little. He preferred to have the snow as deep as possible; shoveled them out in the spring while the snow was dry. He favored Mr. Doolittle's plan of mixed wintering, that is partly in-doors and partly out-doors.

Mr. Cyrenus said it made some difference whether bees were kept on the ground or a short distance from it. He believed in having just a mound of snow over the hive, and not a heavy bank. With a heavy bank, the hives are apt to become damp. He had practiced keeping bees under snow a dozen years.

Mr. Adsit said he had wintered bees in the cellar for 15 years with good success; never tried wintering out-doors.

President L. C. Root said the best bee-keepers and writers differed from him on this subject. He had wintered bees under from 1 to 15 feet of snow. He thought it important to have honey enough in the smallest number of comb. The matter of preparing for winter is the work of an entire season. Bees are from a warm climate and need an even temperature. The best bee-keepers employ artificial heat to keep their cellars warm. This is one of the best winters we can have for wintering bees, and yet they will not winter well. We must have a place which we can warm if the outside air is too cold. He did not believe a purifying flight necessary. He had found that bees kept in till the 1st of May did the best. Those put out early dwindled. He was an earnest advocate of in-door wintering, believing that by this method bees were kept more nearly at an even temperature, and it was nearest to the natural condition of the bees.

Mr. Betsinger said he had failed in keeping bees under snow. He lost so many bees that he abandoned the method. There are some good points in out-door wintering. He combined

these with the best points of in-door wintering. He had cars made 7x6 feet, each car holding 36 colonies. He placed the bees on the cars at his leisure in the fall. He used portable brood chambers. He left the old hives on the summer stands, but moved the brood chambers. Bees will not cling to the old hive, but will stay where the queen and honey are. His bee house was 6x11 feet, with double 4-inch brick walls. There were 4 feet of earth on the roof. There were open spaces to let in fresh air. There were openings on the floor, connecting with the flues between the walls, having a chimney on each of the 4 walls. This kept the air within the building fresh. The points gained were the saving of honey, which was a saving of bees. When the temperature allowed it in the winter, he opened the doors and rolled out the cars, rolling them back before night. This combined the good features of out-door wintering, purifying flights, with the benefits of in-door wintering. He found it impossible to keep bees quiet at a temperature above 36°. The height of inside walls was 7 feet. He built this house over a year ago.

Mr. Clark offered the following resolution, which was adopted:

"Resolved, That as bees are natives of warm climates, that in wintering them in colder climates the requisites to do it successfully are a dark, quiet, and even temperature, and plenty of good sealed honey."

The time selected by the Executive Committee for holding the National Convention, at Lexington, Ky., is October 5, 6 and 7, 1881. All bee-keepers are invited to attend and take part in the deliberations of the Convention. As Lexington is a central point, the Executive Committee hope to have a large attendance from the North, South, East and West, and from Canada, and that the 12th annual meeting of the North American Bee-keepers' Society will be the most interesting meeting that the bee-keepers of the United States have ever held.

N. P. ALLEN, Pres.

The bee-keepers of Ontario will hold their annual convention Tuesday, Wednesday, and Thursday evenings, second week of the Industrial fair, 13th, 14th, 15 September, thus allowing those attending the convention to see the exhibition when it is at its best and also the convention, which promises to be of such importance that no bee-keeper can afford to miss it. Ladies are especially invited to attend. Notice as to place of meeting will be given in due time. D. A. JONES.

The Northwestern Bee-keepers' Association will meet in Chicago, on Tuesday and Wednesday, October 25 and 26. All bee-keepers are cordially invited to attend. It is desired to make this one of the most interesting conventions ever held in the United States. C. C. MILLER, M. D., Pres. C. C. COFFINBERRY, Sec.

The Western Michigan Bee-keepers' Association will meet in Berlin, Ottawa, Co., Mich., Thursday, Oct. 27, 1881, in Huntley's Hall, at 10:30 a. m. All interested, are cordially invited.

WM. M. S. DODGE, Sec. Coopersville, Mich., Aug. 29, 1881.

The Northern Michigan Bee-keepers' Association will hold its fourth Annual Convention at Maple Rapids, Clinton Co., Mich., Oct. 11 and 12, 1881. O. R. GOODNO, Sec.

Bee-keepers' Union.—The Eastern New York Bee-keepers' Union Association, will hold their eighth semi-annual Convention on Tuesday, Sept. 27, 1881, at 10 a. m., at Knowersville, N. Y. All bee-keepers are invited to attend. W. D. WRIGHT, Pres. N. D. WEST, Sec.

SELECTIONS FROM OUR LETTER BOX

Over 100 Pounds per Colony.—Honey gathering in this part of the country, so far, has been good. My 68 colonies I had left in the spring out of 108 last fall, have averaged over 100 lbs., with a prospect of gathering considerable more. Can you tell me the cause of a queen's eggs not hatching? I have a fine-looking queen that I reared this summer. It is over two months since she began to lay, but not a single egg has hatched yet. C. H. STORDOCK.
Durand, Ill., Aug. 27, 1881.

[It is a strange case. The queen has probably been injured in some manner, which has caused sterility.—Ed.]

"The Coming Bee."—Permit me through the JOURNAL, to offer an amendment to my original proposition, and that is as follows:

"Largest and longest worker bees," progeny of a queen reared by the exhibitor—this will exclude *Apis dorsata*, or any other race of bees, not in reach of all. I do not know that I shall send any myself, but think now I shall. I can hardly expect to win the prize, and if I do not, I cheerfully pay the small sum of 25 cts. to know who has the best bees, that I may get of him. I have experimented a great deal in crossing, in breeding for length of tongue, size of bees, and gentleness, and find a marked difference in the different crosses. I am also satisfied that the mother of the bees that take the prize, will have been reared in a horizontal cradle. I send in my 25 cts.; let the ball keep rolling. I hope friend Briggs has received his champion queen, but neither \$10 nor \$25 would tempt me to unqueen my best colonies. Let all who wish for better colonies, send in 25 cts., and the sum will be large enough in the aggregate to find the "coming bee," and if fertilization in confinement can be accomplished, a good reward in cash will bring it about. J. S. TADLOCK.
Kingsbury, Texas, Aug. 23, 1881.

The Bee Journal worth \$10. a Year.—The Weekly BEE JOURNAL comes to hand with the regularity of clock-work, and fills the bill every time. I could not think of getting along without it, if it cost \$10. a year. Our bees are not gathering much buckwheat honey. What is the reason?
Wm. CAIRNS.
Rockland, N. Y., Aug. 30, 1881.

Royal Jelly, etc.—In the BEE JOURNAL for Aug. 24, page 268, Mr. C. J. Robinson advances a theory that I do not understand. He writes: "I claim, as set forth in a former article, that queens are impregnated with royal jelly (drone's semen), while in the larval state." What I wish to learn is, how a nucleus colony composed of all young bees, furnished with only worker eggs to raise a queen, obtain this royal jelly to impregnate the queen in the larval state?
W. H. STOUT.
Pine Grove, Pa., Aug. 29, 1881.

Drouth in Texas.—The great drouth still continues. The top of the ground is drier than at any time since 1864. It cannot well be described better than to say that everything is burnt up. W. H. ANDREWS.
McKinney, Texas, Aug. 20, 1881.

Dry and Hot.—The early part of the season was good for bees, in this section. I started with 3 weak colonies, and bought 4 more. I now have 28 good colonies. I sowed buckwheat, but it was too dry and hot; it does not afford much honey, and unless it rains soon, I shall have to feed to get through the winter. E. ARMSTRONG.
Jerseyville, Ill.

Lycium Barbarum.—I send you all the parts of an ornamental shrub growing in my grounds; will you kindly give its name in the BEE JOURNAL, and how best propagated? It is a remarkable shrub for honey, my bees having been constantly busy on its succession of flowers for over 2 months, and are still so, when everything else is suffering from drouth. It has also the merit of being a very pretty hedge. I. C. THORN, M. D.
Streetsville, Can., Aug. 17, 1881.

[The specimen sent is *Lycium barbarum*, or matrimony vine. It belongs to the order *Solanaceae*, which includes the tomato, potato, nightshade, bitter-sweet, egg-plant, pepper, ground-cherry, horse-nettle, etc. It is easily propagated by layering.—W. J. BEAL.]

The Nicest Honey for Years.—The bees almost all died in this locality last winter, but those that were left after the cold winds had passed, and the sun warmed the bees, began to gather pollen, and increase in numbers and stores. I have 65 colonies now. They have done very nicely. I have the purest and whitest honey this season that I have had for the past 5 years. My honey is mostly in prize packages; have extracted but very little. The greatest question now is, how to winter them without loss. I shall be glad to receive the BEE JOURNAL in its new form next year, and I hope it may increase in interest in the future, as it has in the past. THOS. PIERCE.
Gansevoort, N. Y., Aug. 25, 1881.

A Terror.—This summer has been a terrible one for the bees of this Province, for ever since the blooming of white clover to the present, continuous rains have fallen. My 12 colonies have hardly a pound of surplus honey in them at this date. J. MATTHEW JONES.
Waterville, N. S., Aug. 25, 1881.

Melilot on Timbered Land.—Please tell us in the BEE JOURNAL, whether melilot will do well if sown on timber land, if only the underbrush is cut out? Will the shade of the timber prevent it from yielding honey?
J. S. HUGHES.
Mt. Zion, Ill., Aug. 26, 1881.

[We think it would be difficult to find shade dense enough to prevent its blooming and secretion of honey. It would be better, however, to harrow or brush in the seeds, as birds are very fond of them.—Ed.]

Two Queens in One Hive.—I have found 2 queens in a colony of bees; both are good laying queens, and both seem very peaceable in the hive. About the middle of June the bees prepared to swarm; they had 3 queen-cells, capped over; I waited, and looked in the hive every few days. One day I found that one queen-cell was already hatched, but I could not find the young queen. I then made up my mind to divide the colony, and took out one frame of bees containing the queen, and placed it in an empty hive with comb foundation, leaving it in place of the old hive, and put that in a new place, and by the next day I had a pretty fair colony of bees with the old queen; but on that frame where the old queen was, I found no queen-cell. I left all the queen-cells with the young bees. About a week after dividing, I looked in the hive where the old queen was, and could not find her, and found they had a queen-cell started. I then thought the old queen was lost, or the bees had killed her; 3 weeks ago I found every frame—even the outside ones full of brood, all ready to hatch, and no young eggs or larvae; that drew my attention, and I looked for the queen, but found 2 queens—the old one which was in the colony when I divided it, also a new one, both on one frame, about 4 inches apart, and it seemed to me both were

busy looking for empty cells. I have looked once every week since, and always find the 2 queens peaceably busy, with the difference that the old queen creeps around pretty slow, while the young one is quite lively.

F. W. DITTMER.
Defiance, O., Aug. 25, 1881.

A Good Honey Plant.—Please name this plant; it commences blooming a little before basswood, and the bees prefer it to basswood; it yields honey as white as water, and pollen as blue as blue paint. I got about 100 pounds of honey per colony from this plant. The honey is very sweet, and has but little flavor; people say I make it of white sugar, and object to buy it. The bees ceased to work on it about a week ago on account of bad weather, and brood-rearing stopped. Bees will rear no more brood now, as the last brood usually hatches here the first week in September. I would like the name of the plant so as to know what to call my honey. It would be excellent to cultivate for honey, as it will thrive anywhere, and the seeds fly all over the country. It grows between 3 and 5 feet high. WM. FRITZE.
Duluth, Minn., Aug. 14, 1881.

[Prof. Beal informs me that the plant is willow herb *Epilobium angustifolium*. It is also known as gnat weed and fire weed, and is common throughout the North.—A. J. COOK.]

Eggs that Will Not Hatch.—I purchased an Italian queen of a breeder in Kentucky about a month ago; she was somewhat daubed when I received her, but I introduced her into a good, strong colony. In 5 or 6 days after I found the queen apparently all right, and laying in 1 sheet of comb; being busy, I did not look at her any more until yesterday, which was about 25 or 30 days from the time I had introduced her. As she was a warranted queen, I thought I would look at her worker progeny. I found the queen crawling over the combs as large as life, and appeared to be prolific, but to my great surprise there was no larvæ in the hive, but plenty of eggs in the same sheet. The bees appeared to be perfectly satisfied with her, and did not build queen cells, as with a fertile worker or drone-laying queen. It is something new to me, what do you think about it? J. R. REEVE.
Martinsburg, Tex., Aug. 30, 1881.

[We can assign no positive cause for the phenomenon. You will find in this number a similar instance related by Mr. C. H. Stordock, of Durand, Ill.—Ed.]

H. A. Burch Again.—This has been a good season for bees, here, up to about July 10, when dry weather set in. We have had no rain here from that time until to-day. We are having a fine rain now, and I hope we will have a good fall for honey. The drouth has been tolerably hard on us, but not so severe as it has been elsewhere. I have increased my bees from 5 colonies to 18 by natural and artificial means, and think they are in tolerably good condition. I am sorry that H. A. Burch has disappointed his customers so; I recommended him to some of my bee-keeping friends last spring. He now has their money and gave nothing in return. ISAAC SHARP.
Waveland, Ind., Aug. 31, 1881.

Rolling in Honey.—We began the season with 30 colonies, and now have 72. We increase by dividing and always succeed; 1 colony gave us 5; 2 were artificial and 3 natural. We have 4 acres in buckwheat, and the bees are rolling in the honey. If the weather keeps good we shall have an immense yield. In queen rearing, we were successful. I notice, in other localities, some breeders were unsuccessful. MOLLER & SON.
Fremont, Neb., Aug. 23, 1881.

Vennor's Predictions.—I think Vennor should have a leather medal, in place of frequent storms. We have a disastrous drouth; for frosts, 100° in the shade. There has not been rain enough here for 6 weeks to lay the dust fairly. Of fall honey we have about $\frac{1}{4}$ a crop; basswood about the same, and white clover about $\frac{1}{2}$ a crop. H. D. BURRELL.
Bangor, Mich., Sept. 1, 1881.

My Report.—Early drouth made the clover crop less than $\frac{1}{2}$ the average. Something unknown to me made the basswood the same. We are now in the middle of the fall harvest, and as it is 5 weeks and 2 days since we had any rain (we never knew such a severe drouth in this locality before), our fall yield will not be but $\frac{1}{4}$ of an average crop. JAMES HEDDON.
Dowagiac, Mich., Aug. 29, 1881.

That Bogus Dunham Foundation.—The apiarian supply dealers of Michigan (one of whom I have found to be very punctual and honest in business transactions), wish me to give the name of the firm from whom I purchased foundation, spoken of on page 29 of the AMERICAN BEE JOURNAL of 1881. As by keeping the name from the public, they are all suffering loss of business, I cheerfully comply with their request. Messrs. H. A. Burch & Co., of South Haven, Mich., are the parties that supplied the bogus Dunham foundation. J. B. HALL.
Woodstock, Ont., Aug. 31, 1881.

"The Bridal Eve."—Mrs. E. D. E. N. Southworth's powerful and highly absorbing novel "The Bridal Eve" is shortly to be issued by Messrs. T. B. Peterson & Brothers of Philadelphia, Pa., in excellent style at the exceedingly low price of 75 cents a copy. This fascinating story deals with love, romance, crime, and woman's devotion, and has a plot of the most ingenious and effective description. The scene is laid in England, and the characters mostly move in high social circles. The cheapness of the work should give it an immense sale. Everybody will be delighted with it.

The St. Joseph Democrat says that Missouri was the second State in the Union for the production of honey in 1870. The following shows the surplus production of the counties named, in that year: Atchison, 10,608 lbs.; Andrew, 16,183; Buchanan, 7,626; Caldwell, 21,340; Carroll, 20,812; Clinton, 18,891; DeKalb, 10,627; Davies, 25,052; Gentry, 23,480; Harrison, 46,924; Livingston, 17,331; Holt, 15,670; Nodaway, 15,335; Platte, 12,044; Worth, 17,000.

The South Eastern Mich. Beekeepers' Association, will hold its 4th meeting at the Court House, in Ann Arbor, Wednesday, Oct. 5, 1881, at 9 o'clock a. m.; the week of the County Fair. An adjourned meeting may be held during the week. All interested are invited to attend. By order of the Executive Committee. N. A. PRUDDEN, Chairman.

The North Eastern Wis. Beekeepers' Association, will hold its fall meeting at Peewaukee, Wis., on Tuesday and Wednesday, Oct. 11 and 12. A full attendance is cordially requested. Notice of the place of meeting will be found at the local Post Office. GEO. CHURCH, Pres., Neenah, Wis. FRANCES DUNHAM, Sec., Depere, Wis.

The Eastern Michigan bee-keepers' Association will hold its fall meeting in Detroit, Oct. 4, in the Y. M. C. A. hall, at 10 o'clock a. m. A. B. WEED, Sec.

The Southwestern Wisconsin Beekeepers' Association will hold its next meeting in Platteville, Grant Co., Wis., Nov. 30, 1881. N. E. FRANCE, Sec., Platteville, Wis.

SPECIAL NOTICES.

Single copies of the JOURNAL sent postage paid for 5 cents each.

Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Articles for publication must be written on a separate piece of paper from items of business.

Photographs of prominent Apiarists—Langstroth, Dzierzon, and the Baron of Berlepsch.—Price 25 cents each.

When changing a postoffice address, mention the old as well as the new address.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Faded or Gray Hair gradually recovers its youthful color and lustre by the use of Parker's Hair Balsam, an elegant dressing, admired for its purity and rich perfume. 36w4t

There is More Strength restoring power in a 50 cent bottle of Parker's Ginger Tonic than in a bushel of malt or a gallon of milk. As an appetizer, blood purifier and kidney corrector, there is nothing like it, and invalids find it a wonderful invigorant for mind and body. See other column. 36w4t

A Sample Copy of the Weekly BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Examine the Date following your name on the wrapper label of this paper; it indicates the time to which you have paid. Always send money by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

Premiums.—For a club of 2, weekly we give a copy of "Bees and Honey;" for a club of 5, weekly, we will give a Cook's Manual, a Bee-keeper's Guide, bound in cloth; for a club of 6, we give a copy of the JOURNAL for a year free. It will pay to devote a few hours to the BEE JOURNAL.

It would save us much trouble, if all would be particular to give their post office address and name, when writing to this office. We have letters (some inclosing money) that have no name, post-office, County or State.—Also, if you live near one postoffice and get your mail at another, be sure to give the address we have on our list.

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums:

- For a Club of 2.—a copy of "Bees and Honey."
- " 3.—an Emerson Binder for 1882.
- " 4.—Cook's (Bee) Manual, paper.
- " 5.—" " " cloth.
- " 6.—Weekly Bee Journal for 1 year.

We have a SPECIAL EDITION of the Weekly BEE JOURNAL, just as it will be published in 1882 (16 pages), for distribution at Fairs, Conventions, etc. Any one who may desire to distribute them to bee-keepers will be supplied free, in any quantity they may be able to judiciously use.

Honey and Beeswax Market.

BUYERS' QUOTATIONS.

CHICAGO.

HONEY—New honey is coming in freely and the demand is good.

We quote light comb honey, in single comb boxes, 18¢; 20¢; in larger boxes 2¢ less. Extracted 7¢.

BEESWAX—Prime quality, 18¢@21¢.

AL. H. NEWMAN, 972 W. Madison St. Chicago, Sept. 5, 1881.

NEW YORK.

HONEY—There is no settled market price yet for honey, as there is none selling.

We quote as follows: White comb, in small boxes, 15¢; 18¢; dark, in small boxes, 12¢@15¢. Extracted, white, 10¢@12¢; dark, 7¢@9¢.

BEESWAX—Prime quality, 22¢@24¢.

THORN & CO., 11 and 13 Devco avenue. New York, Aug. 18, 1881.

CINCINNATI.

HONEY.—Last week I paid King Cramer 17¢ per lb. for a lot of about 2,000 lbs. It was in the Muth sections, 5/4x10, without separators. Every comb is perfect, which speaks well for the producer. If Mr. Cramer did not succeed this season, in establishing rules for queen fertilization, he succeeded admirably in getting one of the finest lots of comb honey in the country. Extracted honey is just commencing to be in good demand.

I quote: Good comb honey, in sections, is worth 14¢@16¢, on arrival. Extracted, 7¢@9¢, on arrival. BEESWAX—18¢@22¢, on arrival. I have paid 25¢ per lb. for choice lots. C. F. MUTH. Cincinnati, Aug. 31, 1881.

BOSTON.

HONEY.—The prices of honey are not regularly quoted in our papers here. We quote: Honey in 1 pound sections retails at 25¢; in 2 pound sections, 20¢.

BEESWAX—Prime quality, 25¢.

CROCKER & BLAKE, 57 Chatham Street, Boston, Mass., Aug. 31, 1881.

CLEVELAND.

HONEY.—Comb honey continues in good demand at 20¢ for 1 lb. white and 18¢ for 2 lb. sections. Extracted honey, 10¢@12¢.

BEESWAX—18¢@20¢.

A. C. KENDEL, 115 Ontario Street. Cleveland, O., Sept. 3, 1881.

BALTIMORE.

HONEY.—Both the supply and demand are too meager to report.

BEESWAX—Southern, pure, 21¢@23¢; Western, pure, 22¢; grease wax, 12¢@13¢.—Baltimore Market Journal.

SAN FRANCISCO.

HONEY.—A sale of 50 cases of old extracted, clear, is noted at 10¢, an extreme figure with wholesale buyers. Some new extracted is offering at 9¢, while other lots are limited at 11¢, but the latter price is beyond anything now obtainable, notwithstanding the light supply.

We quote white comb, 14¢@16¢; dark to good, 11¢@13¢. Extracted, choice extra, 7¢@9¢, 10¢@12¢; dark and candied, 7¢@8¢. BEESWAX—23¢@25¢.

STEARNS & SMITH, 425 Front Street. San Francisco, Cal., Aug. 27, 1881.

INDIANAPOLIS.

HONEY.—New, in 1 or 2 lb. sections, 22¢@25¢.—Indianapolis Stock Review.

ST. LOUIS.

HONEY.—Demand improving slightly; prices unchanged.

We quote: New, strained, 7¢@8¢; extracted, in cans, 9¢@10¢; comb, 13¢@14¢.

BEESWAX—Prime yellow sells at 20¢@21¢.

R. C. GIER & CO., 117 N. Main Street. St. Louis, Mo., Sept. 5, 1881.

Local Convention Directory.

1881. Time and Place of Meeting.

Sept. 13-15—Ontario Bee-keepers, Toronto, Ont.

27—Eastern N. Y. Union, Knowersville, N. Y.

N. D. West, Sec. Middleburg, N. Y.

Oct. 4—Eastern Michigan, at Detroit, Mich.

A. B. Weed, Sec., Detroit, Mich.

5—Southern Michigan, at Ann Arbor, Mich.

5-7—National, at Lexington, Ky.

Dr. E. Parry, Sec., New York City.

12—Kentucky State, at Louisville, Ky.

11, 12—Northern Michigan, at Maple Rapids.

O. H. Goodno, Sec., Carson City, Mich.

11, 12—Northwestern Wis., at Pewaukee, Wis.

Frances Dunham, Sec., De Pere, Wis.

12—Central Ky., in Exp. B'dg. Louisville, Ky.

W. Williamson, Sec., Lexington, Ky.

20—Union Kentucky, at Shelbyville, Ky.

G. W. Demaree, Sec., Christiansburg, Ky.

25, 26—Northwestern District, at Chicago, Ill.

C. C. Coffinberry, Sec., Chicago, Ill.

27—Central Michigan, at Lansing, Mich.

George L. Perry, Sec.

27—Western Mich., at Berlin, Mich.

Wm. M. S. Dodge, Sec., Coopersville, Mich.

Nov. 30—S. W. Wisconsin, at Plattville, Wis.

N. E. France, Sec., Plattville, Wis.

1882.

Jan. 10—Cortland Union, at Cortland, N. Y.

C. M. Bean, Sec., McGrawville, N. Y.

25—Northeastern, at Utica, N. Y.

Geo. W. House, Sec., Fayetteville, N. Y.

April 11—Eastern Michigan, at Detroit, Mich.

A. B. Weed, Sec., Detroit, Mich.

27—Texas State, at McKinney, Texas.

Wm. R. Howard, Sec.

May — Champlain Valley, at Bristol, Vt.

T. Brookins, Sec.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

CLOSING OUT FOR 1881.

Six Italian Queens for \$5. Purity, safe arrival and satisfaction guaranteed. Address, 36w4t REV. J. E. KEARNS, Morning Sun, Iowa.

SPECIAL SALE OF QUEENS.

To close out my present stock of fine ITALIAN QUEENS, I will sell 100 Dollar Queens at 65¢ each or \$7.00 per doz. Also, 25 Tested at \$1.00 each. 36w4t E. A. THOMAS, Coleraine, Mass.

FRANCES DUNHAM,

Inventor and Sole Manufacturer of the



Dunham Foundation Mill,

Patented Aug. 23th, 1881.

New Circular and Samples free. 18mtf FRANCES DUNHAM, DePere, Wis.

W. Z. HUTCHINSON,

Rogersville, Genesee County, Mich.

Makes a specialty of rearing fine Italian queens.

All queens bred from imported queens, and from the purest and best home-bred queens, and the cells built in full colonies. No black bees in the vicinity. Single queen, \$1.00; six queens for \$5.00; twelve or more, 75¢ each. Tested queens, \$2.00 each. Safe arrival by mail guaranteed. Send money by draft, registered letter, or by money order drawn on Flint, Mich. He has a stock of queens on hand, and can fill orders promptly. 28cwtf

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MUTH'S HONEY EXTRACTOR AND UNCAPPING KNIFE.



CHAS. F. MUTH, No. 976 Central Av., Cincinnati, O.

BARNES' PATENT Foot Power Machinery

CIRCULAR and SCROLL SAWS.

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to Hive Making. It will pay every bee-keeper to send for our 48 page illustrated Catalogue.

W. F. & JOHN BARNES, Rockford, Winnebago Co., Ill.

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THE AMERICAN BEE JOURNAL

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A line of this type will contain about eight words; fourteen lines will occupy 1 inch of space.

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Special Notices, 50 cents per line.

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Transient Advertisements payable in advance. Yearly Contracts payable quarterly, in advance. Reliable dealers. Cases of real imposition will be exposed.

THOMAS G. NEWMAN,

974 West Madison Street., Chicago, Ill.

Contents of this Number.

| | |
|-------------------------------|-----|
| Editorial: | |
| Editorial Items..... | 281 |
| The Honey Season of 1881..... | 281 |
| Unfortunate..... | 281 |
| Plan for an Apiary..... | 282 |
| The Old, Old Story..... | 282 |
| Another Dishonest Dealer..... | 282 |
| The Bridal Eve..... | 283 |

Among our Exchanges:

| | |
|--|-----|
| Large Crop of Honey in Canada..... | 282 |
| The Late Editor of the Bienen Zeitung..... | 282 |
| Handling Bees Without Smoke..... | 282 |
| Both Sides of the Question..... | 282 |
| Bees in Southern California..... | 282 |

Correspondence:

| | |
|---|-----|
| Honey-Producing Plants..... | 283 |
| Pollen Detrimental to Wintering..... | 283 |
| My Early Experience with Bees..... | 283 |
| The Origin of Drones..... | 284 |
| Are the New Races of Bees Superior?..... | 284 |
| Methods of Obtaining Surplus Honey..... | 284 |
| Bee-Culture for the South..... | 284 |
| Fertilization in Confinement..... | 284 |
| The Three-Band Test for Italian Bees..... | 285 |

Convention Notes:

| | |
|--------------------------------|-----|
| Preparing Bees for Winter..... | 285 |
|--------------------------------|-----|

Selections from Our Letter Box:

| | |
|--|-----|
| Over 100 Pounds per Colony..... | 286 |
| The Coming Bee..... | 286 |
| The Bee Journal Worth \$10 a year..... | 286 |
| Royal Jelly, etc..... | 286 |
| Drouth in Texas..... | 286 |
| Dry and Hot..... | 286 |
| Lycium Barbarum..... | 286 |
| The Nicest Honey for Years..... | 286 |
| A Terror..... | 286 |
| Mellot on Timbered Land..... | 286 |
| Two Queens in One Hive..... | 286 |
| A Good Money Plant..... | 286 |
| Eggs that Will Not Hatch..... | 286 |
| H. A. Burch Again..... | 286 |
| Rolling in Honey..... | 286 |
| Venon's Predictions..... | 286 |
| My Report..... | 286 |
| The Bonus Dunham Foundation..... | 286 |

Notice to Vice Presidents.

I desire to say to the Vice Presidents of the North American Bee-Keepers' Society, that I wish each one would send me a report of bees and honey in their respective States, as it is customary for the Vice Presidents to make such reports at the annual meeting of our Society. I hope that none of them will fail to do so. I would be glad to meet them at the Convention, and become personally acquainted with them. Programmes will be sent to them for distribution to the bee-keepers of their States. N. P. ALLEN, Pres.

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book, 30c. per lb. Don't lose your money. Address Dr. Chase's Printing House, Ann Arbor, Mich. 30mly

WANTED—A few tons of York State COMB HONEY. State probable amount, how soon it can be put in shipping order, and address. 32w4tp F. L. SAGE, Wethersfield, Conn.

HOW TO MAKE MONEY. For particulars enclose 10 cents to Lock Box 318, Kalamazoo, Mich. 34w12t

FREE! A sample copy of the New England Bee Journal. H. Poole, Mechanic Falls, Me. 35w1t

Be SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.

J. C. & H. P. SAYLES, Hartford, Wis.

QUEENS! QUEENS!

One Dollar will buy one of our beautiful Italian, Cyprian, Holy Land or Hungarian Queens; will select the very best, from 200 queens, for \$1.50 each, all warranted pure and safe arrival by mail guaranteed. Send for 20th circular.

H. ALLEY, Wenham, Mass.

\$777 A YEAR and expenses to agents, outfit free, address P. O. Vickery Augusta, Maine. 36wly

Excelsior Honey Extractors.

The following letter explains itself:

A. H. NEWMAN, Esq., Dear Sir: No. 4 Excelsior Honey Extractor (with three-sided comb basket), received to-day and tested. I find it EXCELLENT. I can take from my hives, extract, and return frames at the rate of 100 pounds per hour. Do not know how long I could keep up at that rate. If this isn't work, it resembles it very much.

Truly yours, J. M. SEUCK.

Des Moines, Iowa, July 30, 1881.



Sizes and Prices of Extractors:

| | |
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| No. 1—for 2 Lanastoth frames, 10x18 inc..... | \$8 00 |
| No. 2—for 2 American frames, 12x13 inc..... | 6 00 |
| No. 3—for 2 frames of any size, 13x20 inc..... | 12 00 |
| No. 4—for 3 frames of any size, 12x20 inc..... | 12 00 |
| No. 5—for 4 frames of any size, 13x20 inc..... | 14 00 |

ALFRED H. NEWMAN,

31tf 972 West Madison Street, Chicago, Ill.

ITALIAN QUEENS.

I can now furnish ITALIAN QUEENS, BY RETURN MAIL, at the following prices:

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| Tested Queens..... | \$1 50 |
| Warranted Queens..... | 1 00 |
| Cyprian Queens, untested..... | 1 00 |

As most all the Dollar Queens I sold last year were pure, I will warrant them this year. J. P. WILSON, Mortonsville, Woodford Co., Ky.

THE KANSAS BEE-KEEPER.

Published Monthly at Columbus, Kan.,

A new sixteen-column bee paper, devoted entirely to the best interests of honey producers; dealers in Supplies and breeders of Queens and Bees. Will be sent to any address one year for only thirty cents. We club with the Weekly American Bee Journal for only \$2.15. Sample copies free. Address, SCOVELL & ANSELSON, Columbus, Kansas.

Rev. A. SALISBURY

Camargo, Douglas County, Ill.

Warranted Italian Queens, \$1.00; Tested Italian Queens, \$2; Cyprian Queens, \$2.00; Tested Cyprian Queens, \$4; 1 frame Nucleus, Italian, \$4.00; 1 frame Nucleus, Cyprian, \$5; Colony of Italians, 8 frames, \$8.00; Colony of Cyprians, 8 frames, \$10.00. Wax worked 10c. per lb. Pure Comb Foundation, on Dunham Machine, 25 lbs. or over, \$7. Send for Circular. 1wly

HONEY A SPECIALTY.

W. F. CONNER,

Late of Conner, Burnett & Co.,

161 So. Water Street, Chicago,

GENERAL PRODUCE COMMISSION.

We ask you to correspond with us before disposing of your HONEY CROP, as we can be of much service, having constant intelligence from all parts of the country.

We would refer to JAMES HEDDON, Dowagiac, Mich., and J. OATMAN & SONS, Dundee, Ill. 31wly

FLAT-BOTTOM COMB FOUNDATION.

high side-walls, 4 to 16 square feet to the pound. Circular and samples free. J. VAN DEUSEN & SONS, Sole Manufacturers, Sprout Brook, Mont. Co., N. Y.

Given's Foundation Press

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples. 1wly D. S. GIVEN, Hoopeston, Ill.

ITALIAN BEES

All standard colonies have eight frames, 17 1/4 inc. long and 11 inc. deep. All Nuclei, frames 11 1/4 inc. long and 10 1/4 inc. deep. Single full colonies, \$10; in lots of five, each \$9; in lots of ten or more, each \$8; single pure Tested Queen, \$2.50; 1-frame Nucleus, Tested Queen (June), \$3.50; 2-frame do., \$4; 3-frame do., \$5; 4-frame do., \$5.50; 5-frame do., \$6; 6-frame do., \$6.50; 7-frame do., \$7; 8-frame do., \$7.50. No Dollar Queens handled. Will guarantee safe delivery (at express terms) of every order from my yards. Shipping facilities, six times daily to all points. With 30 years' experience in the propagation and handling of Italian bees, I think I can suit the most fastidious.

To secure prompt attention, money should be sent by New York draft or post office money order. No discount from above schedule.

Address all communications to

J. H. ROBERTSON,

25wtf Pewamo, Ionia Co., Mich.

HONEY

For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

R. A. BURNETT, Commission Merchant,

Successor to Conner, Burnett & Co.,

34w13t 165 So. Water Street, Chicago, Ill.

Bingham Bee Smoker.

The first practical bellows bee smoker. The first and original patent smoker. The first never-failing bee controller. The first direct draft bellows smoker. The first to burn stove wood and not go out. The first durable bellows bee smoker. The first to create a demand for smokers. The first to meet the wants of bee-keepers. The first cinder-proof bellows smoker. The first twenty thousand now in use. The first complaint yet to be received. The first smoker yet to be returned.

The first thing for bee-keepers to do, to save imposition and money, and be happy and safe, is to send a card for testimonials, or half-dozen rates, to

BINGHAM & HETHERINGTON,

ABRONIA, MICH.



JUST WHAT YOU HAVE WANTED!

A Good Foundation Machine

FOR ONLY FIVE DOLLARS!

and one that works with

RAPIDITY AND SATISFACTION.

Having been persuaded to get up several for my immediate friends, I have on hand the patterns, etc., to make any number. Therefore, send in your orders. [31wtf] W. G. PHELPS, Galena, Md.

WANTED—You to send for our Circular and Price list of American-Italians. Address, JOS. M. BROOKS & BRO., 13w6m Columbus, Ind.

THE CANADIAN FARMER,

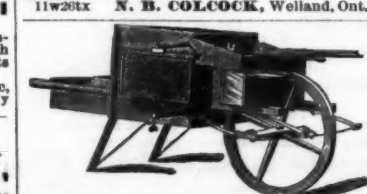
THE ONLY

Agricultural Weekly

PUBLISHED IN THE

Dominion of Canada.

This practical journal is now in its Third Year, and meeting with immense success. The low price of its subscription (\$1.00 per year) in its new and improved form (16 pages 13x10 1/2, folded and pasted) makes it very popular. Its editors are all practical men; it is the Best Advertising Medium in Canada. Sample copies sent free to any address. 11w26tx N. B. COLCOCK, Welland, Ont.



DAVIS' PATENT HONEY CARRIAGE,

REVOLVING COMB-HANGER.

Tool Box and Recording Desk Combined.

Carries honey from the hive to the Extractor, a set of apiarian tools, metal-lined drawers for broken combs and fragments of wax, revolving comb-hanger, which holds comb firmly while pruning or cutting queen cells, writing desk, and wash-basin; will not break nor bruise combs; adjusts to fit all sizes of extracting and brood combs, and is less laborious to handle than the ordinary hand-baskets. Write your address on a postal card, and address it to JOHN M. DAVIS, 30wly Patentee and Proprietor, Spring Hill, Tenn.

Books for Bee-Keepers.

Sent by mail, postpaid, on receipt of price, by

THOMAS C. NEWMAN.

974 West Madison Street, CHICAGO, ILL.

Bee-Keeper's Guide for Cook's Manual of the Apiary.—Entirely re-written, elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. Cloth, \$1.25; paper cover, \$1.

Quinby's New Bee-Keeping. by L. C. Root.—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—\$1.50.

Novice's ABC of Bee-Culture. by A. I. Root.—This embraces "everything pertaining to the care of the money-bee," and is valuable to beginners and those more advanced. Cloth, \$1.25; paper, \$1.

King's Bee-Keepers' Text-Book. by A. J. King.—This edition is revised and brought down to the present time. Cloth, \$1.00; paper, 75c.

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, \$2.

Bleasdale Bees. by John Allen. A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, \$1.00.

Bees and Honey; or, successful management of the Apiary. by Thomas G. Newman.—This embraces the following subjects: Location of the Apiary—Honey Plants—Queen Rearing—Feeding—Swarming—Dividing—Transferring—Italianizing—Introducing Queens—Extracting—Quelling and Handling Bees—Marketing Honey, etc. It is published in English and German.—Price for either edition, 40 cents, postpaid.

Dalston Theory.—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. 15c.

Honey, as Food and Medicine. by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc.; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in English and German. Price for either edition, 6c.; per dozen, 50c.

Wintering Bees.—This contains the Prize Essays on this subject, read before the Centennial Bee-Keepers' Association. The Prize—\$25 in gold—was awarded to Prof. Cook's Essay, which is here given in full. Price, 10c.

The Hive I Use.—Being a description of the hive used by G. M. Doolittle. Price, 5c.

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Chas. C. P. Daddant, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price 15c.

Practical Hints to Bee-Keepers. by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, 14c.

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 20 pages. 5c.

Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has recipes, a table of doses, and much valuable horse information. Paper, 25c.

Ropp's Easy Calculator.—These are handy tables for all kinds of merchandise and interest. It is really a lightning calculator, well bound, with slate and pocket. Cloth, \$1.10; Morocco, \$1.50.

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